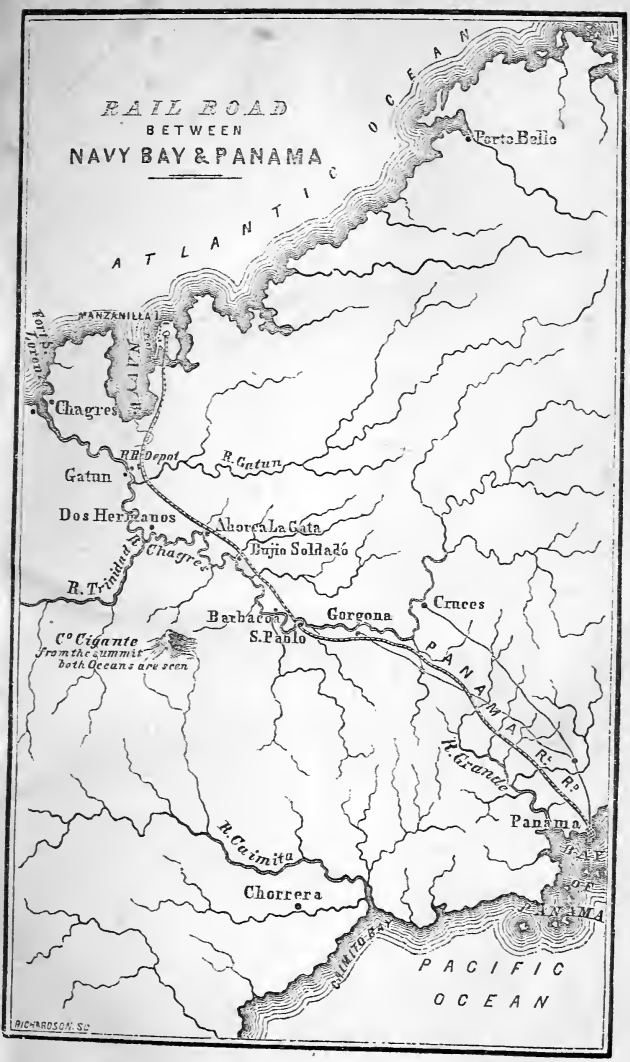
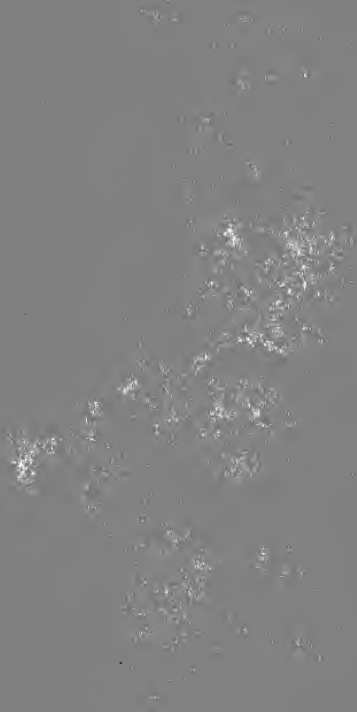

THE LIBRARY OF CONGRESS
1800


RAIL ROAD
BETWEEN
NAVY BAY & PANAMA
ATLANTIC OCEAN
Porto Bello
MANZANILLA
Fort Sherman
NAVY BAY
Chagres
RR Depot
R. Gatun
Gatun
Dos Hermanos
Ahorca La Gata
Bujio Soldado
Chagres
R. Trinidad
Barbacoa
Gorgona
Cruces
S. Pablo
Co Cigante
From the summit both Oceans are seen
PANAMA R. R.
R. Grande
Panama
R. Caimita
Chorrera
PACIFIC OCEAN
RICHARDSON. Sc




NICARAGUA
Pt. Realejo
León
LAKE LEON
Bluefield R.
Adams T.
ATLANTIC
OCEAN
Bluefield T.
Nicaragua
S. Juan del Sur
S. Carlos
LAKE NICARACUA
San Juan R.
S. Juan de Nicaragua
S. Cruz
COSTA RICA
CHIRIQUI
NAVY BA
Chagres
Panama
Chorrera
Santiago
PACIFIC
OCEAN
Pt. Burica
QUIROS
I. DEL REY
PANAMA
Pt. Mala
SOUTH AMERICA
RICHARDSON, S.C. N.Y.

THE

ISTHMUS OF PANAMA,

AND

WHAT I SAW THERE.

BY

C. D. GRISWOLD, M. D.,

RECENTLY ONE OF THE SURGEONS OF THE P. R. R. CO.

NEW YORK:
DEWITT AND DAVENPORT,
TRIBUNE BUILDINGS.
1852.

BAKER, GODWIN & CO., PRINTERS,
TRIBUNE BUILDINGS.

TO JOHN LLOYD STEPHENS.

YEARS ago, when I first read your books on Central America, I felt that I had made a new acquaintance, who introduced me to a better knowledge of a strange land, and a peculiar people, with all that was known of a still more remarkable race, who left but tottering monuments to tell us that they have existed.

I little thought then that it would ever be my privilege to know you, except as my instructor through your writings; and much less did I think it were possible that I should ever sit down with you beneath the shade of the Palm, in the same sunny clime, bordering on the field of your former investigations, and there listen while you taught me many things which I was so glad to learn.

Since commencing the preparation of these pages for the press, there is no name that has been more familiar in my thoughts than yours—not that we ever spoke one word together upon the subject, for I had not the task in contemplation when I saw you last—but because I regard more earnestly the authors of works on facts, than of fiction; and, as a slight tribute to one of the most useful among the living writers, I crave the permission to dedicate this unpretending volume to you.

CHAUNCEY D. GRISWOLD.

22 WARREN STREET,
NEW YORK, DECEMBER, 1851.

PREFACE.

A life devoted almost exclusively to Medical Science as a profession, affords but little time for the cultivation of the necessary qualifications for a popular writer; and as such the author of these pages has never thought of venturing a claim. It has been his desire, in writing this work, to furnish the travelling public especially, with some needful information concerning the Isthmus of Panama, and thus making a useful, rather than a pleasing book.

C. D. G.

CONTENTS.

THE ISTHMUS OF PANAMA.

CHAPTER I.

Character of the Spanish settlers—Agriculture the basis of National prosperity—Example of the Spaniard and the Puritan—First settlement on the Spanish Main—Discovery of the Pacific Ocean by Balbao—He founds the City of Panama—Porto Bello—Fort San Lorenzo.

Although the History of the Isthmus of Panama records many remarkable events, and the ruins of ancient towns and fortifications show that this has been deemed valuable territory, and occupied by a wealthy population, yet nothing is more evident than that its settlers were actuated by the love of adventure, and that their pursuit was for gold.

While Spain, with her almost inexhaustible resources, was sending her colonists to this country, and the fertile islands of the West Indies, and gathering rich harvests of gold, and building fortifications for her protection and permanence, the hardy Puritans were struggling for a simple subsistence by

cultivating the rugged soil upon the northern coast. The one trusted for the future upon her soldiers and riches, while the other established the foundation of a great and permanent commonwealth, by cultivating the soil. The Puritans were the fathers of a people that now extend across this broad continent, from the Atlantic to the Pacific, and have built up countless cities, and established commercial relations with every other nation; while the Spanish colonies have been depopulated, and bear but feeble traces of a once powerful existence.

Such has ever been the history of communities who neglected agriculture as the great source of wealth. A beneficent Providence has made the cultivation of the soil one of the chief means on which depend a nation's prosperity and advancement; but the Spaniard neglected this, and after having skimmed the mines of their surface gold, or become disappointed in its pursuit, left the country the same almost unbroken forest that he found it, and so it remains to this day.

About the year 1510, Vasques Nunes de Balbao established the town of Santa Maria on the Darien Gulf. This person, whose career was brilliant, although short, had owned an estate in Hayti, where, having become involved in some difficulty with the government, he was sentenced to be executed; but he escaped by secreting himself in a bread-cask, on board a vessel about to sail on an expedition to "capture Carthagena, Veragua, and other western

countries." The vessel on which he was secreted was commanded by one Enciso, and was subsequently wrecked off St. Sebastian, after having visited Carthagena. By the energy and perseverance of Balbao, it was finally got off, and set sail, under his charge, for the coast, of which he took formal possession in the name of the Spanish monarch, and commenced the town of Santa Maria. In the meantime, he had gained a perfect ascendency over Enciso, the original master of the ship. In the middle of September, 1513, he, in company with the afterwards celebrated Francis Pizarro, started on an expedition inland, which resulted in the discovery of the Pacific Ocean, and the founding of the important city of Panama. "On reaching the shore, he walked into the sea up to his middle, with his armor on, and solemnly performed the ceremony of taking possession, in the name of the crown of Castile, of the ocean which he had discovered."

Balbao possessed, in a remarkable degree, the faculty of controlling the passions of men, was always kind and attentive to the sick, and consequently popular with his subjects; yet, notwithstanding all this, and the large amounts of gold he sent home, which he fairly purchased of the natives, he was finally beheaded on a charge of having cut down trees to build a town, without the governor's license. It is scarcely necessary to say, that this loyal murder was instigated by those who were jealous of his popularity, and envious of his honors.

Thus perished, in 1517, a good man, who had done his country more valuable service than any other, except Cortes—a victim of designing knavery—at the age of forty-two years. Pedrairas, who was the principal plotter against Balbao, succeeded him at Panama, and after having committed many atrocities, and causing more destruction of Spanish lives in his mismanaged wars, than did Cortes in his conquest of Mexico, finally, from jealousy, had Hernandes, who conquered the territory of Nicaragua under him, put to death. While there is judgment and justice in heaven, why need we wonder that Spain was never prospered in her American possessions, after having treated the great discoverer as she did, and afterwards executing, on such pretences, his just and enterprising followers, to give power to the treacherous instigators of the crimes?

Panama, when discovered by Balbao, was an Indian village, which gave place to the city, the ruins of which are now known as Old Panama, and which was destroyed by the buccaneers, under Morgan, in 1670. During the prosperity of the old city, Porto Bello was built on the Beautiful Harbor, which its name implies, about twenty-five miles east of Navy Bay, and was made the northern terminus of a paved mule-road from Panama, which to this day remains, at some points, in a state of tolerable preservation, while at others all traces of it are swept away. The most remarkable statements have been made respecting this place, as a depot for the trade

of the South American Pacific coast. That it was made the shipping port for the products of the South American mines, in a great measure, there may be no doubt; but that "bars of silver and ingots of gold were piled in the streets, without fear or anxiety for their safety," we can hardly credit, even in this golden age, although all this is positively asserted; and that "gorgeous displays of specie were witnessed in these times," and that trade was so abundant and profitable, that "the rent of a floor in some of the houses cost the prodigious sum of one thousand dollars per month," is scarcely credible. The writer we quote remarks, that this was "her golden age." It must have been, for she looks very unlike it now. A very strong fortification was built here, the walls of which are in a tolerably good state of preservation to this time; but there is no need of her watch-towers or sentinels now, for no one goes there who can keep it, there being no inducement to do so; and, moreover, from the reputed unhealthiness of the place, it is avoided as much as possible. The town is built at the foot of high mountains, and the harbor is so land-locked that the sea breeze is mostly shut out, consequently the causes of disease are not only generated, but retained there. It was, probably, during those brilliant days of Porto Bello, that the Fort San Lorenzo was built at the mouth of the Chagres River. How different must have been the scenes at these places, while the busy sounds of the builders were to be heard in these stupendous

works, which now stand in solemn silence, hoary with age, proud monuments of architectural skill, upon whose ramparts lie prostrate, to this day, the heavy guns that once thundered forth the laws of an invading race, but are now as inoffensive and powerless as so many fallen trees.

CHAPTER II.

Further reasons of Failure by the Spaniards—Sources of Historical Information—Spain attempts to keep her discoveries a secret—The Buccaneers—Peculiarities of the Buccaneers.

THERE are, undoubtedly, other reasons than such as are hinted at in the last chapter for the slow advancement, or retrogression, and the present condition of the Spanish settlements in both North and South America. The Spanish united with an indisposition to till the soil, and a sort of Don Quixote chivalry, which is of very little value in practical affairs, a constitutional and hereditary lack of enterprise, which will render them, according to some of the wise prophets of our time, as much the subjects of the Saxons as the old Iberians were of the Romans. They are, unhappily for themselves, without the progressive element, and this, when the world is rushing forward at its present pace, is to be without the first principle of national respectability, or even of national existence. How easily the Isthmus of Panama may be made rich and populous, I trust will soon be seen, from the new influences that are operating there. The present changes in its condition are scarcely less important than the most radical and striking from the days of Balbao.

Since the beginning of that tide of emigration across the Isthmus of Panama, which results from the discovery of the gold region in California, and the greater interest which has been felt in this little but important territory by capitalists, who have contemplated by some means the establishment of connections between the Atlantic and Pacific, there has been no lack of historical notices, as well as descriptions of its surface, &c.; but I have seen scarcely any thing that bears a mark of original investigation, or that has any material freshness even of expression. The old gazetteer and encyclopedia paragraphs have been constantly re-produced. And as my object is not so particularly to offer a history of Panama as it is to place in the hands of emigrants some needful and interesting descriptions of the Isthmus, its phenomena, resources, &c., I shall not attempt much originality on this point. From a recent number of Chambers's "Papers for the People," the facts in the present chapter are for the most part derived, and these facts may at least entertain the reader, though he cherish a far greater anxiety respecting what is present, and what he will have to encounter, if he shall for any purpose go there.

There was something magnificently ludicrous in the notion which the rulers of Spain conceived—of keeping the discoveries of the immortal Genoese a close secret to themselves. That this idea was seriously entertained, there can be no doubt. In 1517, an English merchant-ship which made St. Domingo, was fired at by the new authorities there, and driven

away. The news of this incident occasioned great consternation in the councils of the home government; and although the zeal of the governor of St. Domingo was duly commended, it was gravely suggested that the wiser course would have been to have siezed the vessel and detained the crew, as it was now much to be feared that the sailors would not only, on their return to Europe, report their discovery, but teach others the route to the golden possessions of his Catholic Majesty. This brilliant scheme of locking up the two Americas as "treasure trove" for the especial use and enjoyment of the finders not succeeding, it was determined to fortify the imaginary right of the monarchs of Spain to the undisturbed sovereignty and possession of countries of which no European had yet surveyed a hundredth part of the coast line, by the authority of the church. In 1524, Pope Alexander VI., the father of the Borgias—Lucretia and Cæsar—issued a bull, solemnly conferring the Americas, or New Indies, as they were termed, with all adjacent islands, on the king of Spain and his successors. This gift of the head of the church, those monarchs applied all the power they could command to enforce and maintain, and they consequently soon found themselves in collision with thousands of the hot and adventurous spirits of Europe, who, despite the spiritual and temporal thunders wielded by the Spanish monarchs, resolved at all hazards on securing a share of the glittering prize which the genius and daring of the navigators of various climes had brought within the reach of a

dazzled and astonished world. In 1526, two years after the issue of the bull, a Mr. Tyson was deputed to the new countries as agent for a company of English merchants. He was abundantly successful, and private enterprise was of course stimulated into great and constantly increasing activity, by the profits which accrued to the adventurers. To check the audacity of the trespassers upon his new dominions, the sovereign of Spain instituted a coast guard, whose duty it was to capture and slay all intruders upon the shores of the Spanish main and West India islands. A more hopeless task, powerful as Spain was before her gold and silver discoveries, can scarcely be imagined. To aid the otherwise altogether insufficient efforts of the guarda-costas, the terror of mutilation and torture was superadded to that of death, by the Spanish authorities, and Europe rang with the stories, doubtless somewhat exaggerated, of cruelties practiced by the Spaniards upon the luckless traders who fell into their hands. These iniquities were retorted upon the perpetrators with abundant interest. The American seas speedily swarmed with buccaneers, flibusters* —Brethren of the Coast—consisting of English, Scotch, Welch, and Frenchmen, whose self-imposed mission it was, whilst enriching themselves by trade

* The origin of these names is curious enough. Flibustier, the French term, is a corruption of the English word Freebooter; and the term Buccaneer arose from the name "Boucan," by which the Baribbean Indians designated meat which they taught the "Brethren of the Coast" to preserve in a peculiar manner, and which constituted the chief portion of the rover's food. Hence "Boucanier"—Buccaneer.

and plunder, to avenge upon the Spaniard whatever wrong or cruelty he had inflicted upon their countrymen. These desperadoes soon became extremely formidable, and the entire power of Spain, fiercely and lavishly exerted, proved utterly insufficient to seriously check, much less to put them down. One man, a Frenchman by the name of Montbar, was so excited by a recital of the cruelties practiced by the Spanish authorities, that he sold all he possessed, fitted out a vessel, sailed to the American coast, and became ultimately so terrible by his retaliatory excesses, as to acquire amongst the "Brethren" the distinguishing title of "The Exterminator." A strange mixture of generous daring and remorseless cruelty appears to have characterised the doings of these men; and their religion, in a certain sense, was occasionally as conspicuous as their ruffianism. A French captain, of the English name of Daniel, shot one of his crew for disrespectful behaviour during the celebration of mass; Captain Richard Sawkins threw all the dice in his ship overboard when he found he could not otherwise prevent his sailors from gambling on the Sunday; and the first thing Captain John Watling did, on assuming command, was to order his freebooters to keep holy the Sabbath day. These gentlemen did not, it must be remembered, wait to be themselves attacked, nor did they confine themselves to retaliation upon the Spanish authorities and forces for injuries inflicted upon others. They pounced upon every Spanish ship or settlement they were able to master, and commenced

business the instant they arrived on the scene of action; in order, to use their own expression, to pay themselves beforehand (*se dédommager d'avance*) for any mishaps which might in the future befall themselves or their countrymen. The arrogant pretensions of Spain were also resisted by the sovereigns of England, though feebly and inefficiently; and it was not only in the harbor of Cadiz that Elizabeth's sailors, in Drake's expressive phrase, "singed the whiskers" of the projector of the Armada. The English queen ridiculed the Spaniards' assumption of exclusive sovereignty over regions which they could not even pretend proximately to occupy; James and Charles held the same doctrine; and Northern America, which Spain, finding no gold there, cared little about, was gradually colonized. The effective chastisement of the Spaniards in the American seas, was reserved for the strong hand of Cromwell. Beneath the shadow of his terrible name the infant states dwelt in peace; the island of Jamaica was wrested from Spain; and the buccaneers were astonished and displeased to find their vocation suddenly gone by the appearance of the Protector's admirals in the waters where the flag of England had never before waved in triumph and supremacy. The Restoration once more changed the aspect of affairs, and the sea-rovers and their foes were again engaged in incessant conflict. This was the period of the celebrated Sir Henry Morgan's exploits, the most redoubtable of the Brethren of the Coast, and a gentleman who, for his great and varied merits, or the

presents he conferred on Lady Castelmaine, was not only knighted by Charles II., but invested with the deputy-governorship of Jamaica, and the presidency of the Admiralty Court there; in which capacities he had the pleasure and satisfaction of hanging a considerable number of his old friends and comrades who were so ill advised as to persist in a course which had led their old leader to dignity and fortune. The scene of the principal exploit of this desperado was the Isthmus of Panama.

CHAPTER III.

History of the Isthmus continued—Crusade of the Buccaneers against Old Panama—Its plunder and destruction by Morgan and his men, in 1670.

Among the few modern writers who have contributed to redeem the history of this country from the oblivion to which it was fast sinking, the well-known Dr. Theller is deserving honorable mention for the service he has done in this field of inquiry. I frequently encountered him on the Isthmus, and am indebted to him for the particulars of the important episode connecting with this region the name of Morgan.

The history of that period, on this coast, and all that was then known as the "Spanish Main," is but one series of aggressions on the Spanish possessions, and the Spanish shipping returning home, by numerous bands of men known as "Freebooters," or "Filbustiers." Among them was one desperate character, named Morgan, an Englishman. He was the most reckless and bloodthirsty among thousands whose passion was blood, and whose trade was robbery. After having desolated a goodly number of the young Spanish towns on the main coast of the Caribbean Sea, he thought he would visit Panama on

the Pacific—then allowed to be the richest city on the continent. He issued a proclamation, calling upon all the adventurers, English and French, who resided in Jamaica, Tortugas Islands, and St. Domingo, to assemble on a certain day, when he would inform them of an adventure that would enrich them all, and allow them—if any wished—to return to England or France, and spend the rest of their days in opulence and peace.

The place chosen for the rendezvous was Port Gongon, on the south of St. Domingo; and on and before the day, vessels from all quarters, full of daring, bold men, were to be seen entering the little harbor. Morgan, in his own twenty-four gun frigate, the "Kite," arrived on the day; and when he unfolded his plans to the assembled buccaneers, and asked for volunteers, all rushed forward to his standard. He was elected commander-in-chief on land, and admiral on water. He appointed a commander for each vessel, and set sail with thirty-seven vessels, and 2,200 men. Their course was directed towards the island of St. Catharine, which they took, and where they found three prisoners that had been sent from Panama, whom Morgan decided should act as guides for him, promising them freedom and money, if faithful; instant death, if treacherous. Captain Bradelet, a Frenchman, with four vessels, was sent to take possession of Fort San Lorenzo, at the mouth of Chagres river. The fort was taken after a desperate resistance; out of three hundred men who garrisoned it, only fourteen were left alive, the rest

having fallen in the hand to hand conflict in repelling the frequent assaults of the freebooters.

Morgan gave orders to repair the fort, and left 500 men for its defence, and 150 men on board the vessels, to guard the harbor, and prepare for any emergency. He prepared a fleet of canoes, and with about 1,300 daring followers, and a few pieces of light artillery, he ascended the Chagres river, amid the shouts and good wishes of that part of his little army that he left behind. The voyage was perilous and tedious. They had little or no provisions with them, and the flying Spaniards had destroyed or driven away everything which could nourish or sustain life. Besides, on their arrival at Cruces, they found that that place had been fired by the retreating Spaniards, and they had to get along as best they could. The mosquito fleet of canoes were sent back to Chagres, with enough men to guard them, and with whatever was bulky or heavy, that would impede the rest in a journey across the Isthmus. They left Cruces in high spirits, and twelve hours after were gratified with the sight of the glittering spires of Panama, but at the same time they perceived a large ship and five smaller ones departing for the Island of Taboga, and carrying with them part of the wealth they had already counted as their own. On nearing the city, they found a large force of armed Spaniards awaiting their arrival—nearly quadruple their own number. Morgan addressed his men; he pointed to the ships carrying away the treasure, but reminded them of that of the churches, and the large

masses of gold that had accumulated in the hands of the merchants; that the whole Spanish army stood before them, and that now was the time for them to acheive a splendid victory, or be totally annihilated.

The Spanish force was a splendid looking body of men, dressed in silks and satins, and riding magnificent horses, but when the rough, ferocious-looking buccaneers had grappled with them their "hour had come." Of the Spanish cavalry but fifty men escaped. The infantry, seeing the manner in which the cavalry were treated, after a few vollies, did not wait for the charge, but began to run in all directions, pursued with tiger-like ferocity by the the buccaneers, who killed hundreds of them while flying. An officer taken prisoner, told Morgan that the city was deserted, most of the women, children, and treasure sent to Taboga, and that the Governor had left to defend the place, 3,000 infantry, 400 cavalry, and 600 Indians. This army was defeated and cut to pieces by Morgan, with a loss of two men killed and two wounded. The old city of Panama fell into his hands after a battle of two hours, against a force quadruple to his own. To prevent his men from getting drunk, lest they might be surprised and taken, he told them that the wine and other liquors had been poisoned by the priests. He sent, under the command of an English captain, in a small vessel, (which they took in the act of cutting her cable), a party of twenty-five men to the Island of Taboga, to fire all the houses on the island, and to bring back the vessels that had left. Next day the party re-

tured, bringing with them three of the larger ships, laden with specie and valuable goods. They had found, besides, about a hundred mules loaded with the same cargoes, trying to push into the interior of the island to secrete them. For three weeks did the whole party remain in Panama, collecting all the valuables they could find, and making excursions in the surrounding country for the same purpose, that were highly successful. The prisoners were held to ransom, according to their wealth, which contributed much to the general fund. On leaving Panama, the amount of baggage was immense, and required a strong guard. Whether it was to punish the Spaniards for some past actions, or for some newly discovered treachery among the citizens, is not known, but Morgan took 500 of them with him as prisoners, and ordered the city to be fired. After two days, they arrived at Cruces, where the prisoners were ransomed, and allowed to return, while the buccaneers descended the river to Chagres, where there was a division of the spoil; Morgan's share being sufficient to keep him in Jamaica, the rest of his days were spent in a style of lavish hospitality, and in dispensing his wealth in the most liberal manner on all objects that attracted his admiration.

Thus Panama—"The Old," as the natives call it—fell, and it remains in ruins down to this day. The inhabitants preferring a locality more defencible, chose the site of the present city (six miles distant), and in that year, (1670), commenced their buildings and defences.

True to the policy of Spain in all her transatlantic possessions, her governors were always soldiers, and the sites of her cities were invariably chosen more with reference to military resources than for commerce. A good harbor, where a ship could lie close to the shore, and receive or discharge her cargo, was a thing to be dreaded. Oh, no! choose some spot on an open roadstead, where no vessel of any burthen can approach nearer than cannon shot, and would have to embark or disembark in small boats, giving time to the garrison to sink them if an enemy. In reference to these views the present site of the city was chosen.

The fear of death or of further robbery by the freebooters, had the effect upon the houseless inhabitants of driving from their minds much of the sadness they naturally felt for their recent loss, and set them to work with alacrity in building up and fortifying their new city; at the same time, it is but natural to believe, that after the fatigues of the day, they could not but regret the comforts of which they had so recently been bereft. Their "Beautiful City," with its six thousand houses, constructed of cedar wood—its eight convents—its cathedral—its hospital, and its numerous gardens and villas, owned by its wealthy merchants, that stretched far into the surrounding country—their haciendas, where they could retire at different seasons—their mines of gold, worked by their negro slaves, brought by the Genoans, many of whom had been captured and retained by themselves were all sources of melancholy; but

all was gone, and their repining was altogether useless.

Perseverance and incessant toil soon surrounded them again with the comforts they had lost; and the security they felt in their new and now partially fortified home, made them forget their old one, when, after a lapse of fifteen years, they were again affrighted with the intelligence that the freebooters were in their vicinity, and, doubtless, would revisit them. Spies were sent out, and returned giving an account of a number of the ships of the freebooters at anchor, about thirty leagues below, at a place called the King's Islands. Hourly expecting an attack, they prepared themselves (this time behind their entrenchments) to receive the enemy warmly.

The fleet of the buccaneers was composed of ten vessels—two frigates, four ships, three barks, and a brig. Out of the ten commanders, eight were English, one French, and the other Dutch—the last, called David, was their admiral. The total number of men was eleven hundred.

The greater part of these vessels had been captured by some Englishmen under David, and brought through the Straits of Magellan to the Pacific. Their principal object was not, however, to attack the new city, but to lie in wait for the Spanish fleet, which at that season of the year (April) was coming from Lima to Panama. Still, to keep his men employed, rather than have them gambling on board, in idleness, the admiral had no objection to their doing a little land service, where something could be gained, with little

loss of life or time. He would not allow them to attack the newly fortified city then, but chose rather to send five hundred of them in boats to attack another smaller pueblo called "Seppa," or "Chiapa," which they did, but found little treasure in it; so little, indeed, that they considered the expedition "a great loss of time and of very little profit." On the 8th of May the fleet weighed anchor, and passed Old Panama, which had been destroyed fifteen years before, by Morgan and a great many of the older men on board. They sailed slowly, passed the new city out of gun range, and, after some time, went down to the Island of Taboga, which place, the historian says, seemed to be an enchanted spot, on account of the beauty and variety of its vegetation, and by the neat, little, deserted villas, built by the inhabitants of Panama. They waited there some weeks for the Spanish fleet, which, at length, on the 17th of May, appeared in sight. The freebooters put to sea, and prepared for the combat. On drawing near them, the Spaniards, had they had any doubts before, were soon informed who were their enemies; as well from the appearance of their ships, as from that ominous flag—the Skull and Cross-Bones, the piratical emblem under which so many atrocities had been committed. In answer to this. the royal standard of Castile and Leon was given to the wind; and, more significant still, could be seen the Spanish officer nailing this flag to the mast.

The buccaneers advanced boldly to the fight. The cheers of the men and their extravagant mani-

festations of joy, showed that, in their own estimation, victory was sure to be theirs, and that the hopes they entertained were about to be realized. The Spaniard would not allow the buccaneers to approach too closely, but kept his distance—his superior metal raking the adversary at every shot, while from the distance, the artillery of the other was completely powerless. David and his men could stand this no longer, but broke through shot and shell to grapple with their prize. For a long time the battle was contested and interrupted by various circumstances. At the commencement, the Spaniards had the advantage; and had they had a commander equal to any of those of the opposing ships, the result would have been different. Both parties withdrew —the Spaniards under the shelter of the guns of the ramparts of the city, while the others sailed up the coast, and in a few days appeared again, with their vessels repaired and themselves recruited in spirits, ready to resume the contest. The Spaniard had, meantime, fortified a part of the city, and placed some very heavy artillery that would bear directly upon the ships of the buccaneers, and under the protection of these guns did the Spanish fleet lie, while the enemy tauntingly sailed about the harbor and kept them for weeks in a state of blockade, with a force so vastly their inferior.

The "masterly inactivity" of the Don overcame the patience of David and his men, and they for a while agreed to abandon the blockade, and go on small expeditions along the coast, sacking cities, pil-

laging vessels, and whatever other honest-like means they could turn their hands to, and that would procure them treasure worthy of their notice. One of the most important of these expeditions was directed against the city of Raeljo, then a place of some importance, about 800 miles west of Panama. The city was taken, sacked, and burned in October, with a considerable number of small towns and villages in the neighborhood, from which much treasure was obtained.

Early in the year 1686, the buccaneers returned with their fleet, now somewhat augmented by the Spanish prizes they had taken. They directed their course towards Taboga, which they made their headquarters, and depot for the valuables they had obtained in their cruise. For a while, they busied themselves in fortifying the island, after which they determined on making, says the Spanish historian, a "ferocious onslaught" on Panama. As a preliminary measure to their attack, they sent a messenger to the Governor to deliver up *forthwith* the prisoners which the Spaniards had taken in the previous engagement on the seas, on board of one of the ships which they, the Spaniards, had carried by boarding. This polite request was granted. In a few days after they made a second demand or requisition on the Governor for provisions and liquors and wines of all sorts, to sustain them during their little pleasure trip on land. This, too, was immediately granted. Yet, another demand was made upon him for six thousand dollars, and this, also, was granted. At

last, navely says our friend, the narrator, they became so emboldened by their success, that with an audaciousness only becoming freebooters, they again made a levy of ten thousand dollars upon him; and again, for a still further sum of ten thousand dollars, and the chief magistrate (as he calls the Governor) submitted with shame and humiliation. Having extorted these sums, and being somewhat disgusted with the pusilanimity of these men, behind their trenches, the buccaneers retired, satisfied with their success, and proceeded up the Bay of Panama.

CHAPTER IV.

History continued—Scottish Darien Expedition—Spanish Measures against it—Its Fate—Boundaries of the Isthmus of Panama—Population—Physical Aspect—Geological Observations.

MATTERS thus progressed, with varying fortune, according to the author we have been quoting, till the close of the seventeenth century, when the peace of Ryswick enabled the government of Spain to put forth all its strength in defense of their South American possessions, and a comparative calm ensued in those latitudes. It was about this time that the project and failure of the memorable Scottish Darien expedition occurred. Mr. Paterson, a Scotch gentleman of a remarkably speculative and enterprising turn of mind, conceived the idea of securing the "door of the seas"—his own expression—by establishing a powerful half-commercial, half-military colony to the eastward of Porto Bello, on a line of coast of which he averred the Spanish government were not the rulers, either *de facto* or *de jure*. Mr. Paterson first proposed his scheme to the English government, by whom it was coldly rejected. He afterwards, by the zealous coöperation of Fletcher of Saltoun, obtained the support of the Marquis of Tweedale, then chief minister of Scotland, and

other influential persons, for his project; and the ultimate result was, that an act of parliament passed the Scottish legislature, and was duly consented to by King William III., authorizing and incorporating the Scottish Darien Company. This was no sooner done than a sudden furor seized the usually cautious Scottish people. Mr. Paterson's estimate of the required capital was £2,000,000 sterling; and £400,000, a full half of the entire specie of Scotland at that period, was at once subscribed by the projector's countrymen. English merchants also applied for shares to a large amount, and the Hamburg capitalists entered eagerly into the speculation. This was scarcely to be wondered at, for, according to Mr. Paterson, the humblest shareholder was certain to acquire enormous riches. The prize to be obtained, according to the projector's statement, as given in Sir John Dalrymple's "Memoirs of Great Britain and Ireland," was no less than the exclusive possession "of the door of the seas and the key of the universe, which, with anything of reasonable management, would enable the proprietors to give laws to both oceans, and to become arbitrators of the commercial world, without being liable to the fatigues, expenses, dangers, or incurring the blood and guilt of Alexander and of Cæsar." This tissue of extravagance and folly will give the reader some idea of the glittering prestige attached to the Isthmus of Panama by a certain class of minds, from the day when Nunez de Balbao descried from one of its hills the Pacific on the one hand and the Atlantic on the other.

In another document, quoted by the same authority, Mr. Paterson says, "Trade will increase trade, money will beget money, and the trading world shall need no more to want work for their hands, but will rather want hands for their work." Besides the gold which was to be had for the trouble of finding it, Mr. Paterson proposed that a duty of 5 per cent. should be levied for the profit of the company on all merchandise passing the Isthmus, and 10 per cent. on specie, gems, &c. It is not surprising that the avidity with which shares in this, under the circumstances, preposterous scheme were taken up, should have suggested to Law, as he afterwards declared, the notion of his far more audacious Mississippi project; but it is astonishing to find that the East India Companies, both of England and Holland, exhibited a stupid and envious dislike of the scheme, and prevailed on William III., notwithstanding his sanction of the Scottish act of parliament creating the company, to discourage and thwart the proposed emigrants in the basest manner. The Hamburg merchants, although they talked rather largely, were induced to withdraw their subscriptions, and the English capitalists did the same, so that the entire pecuniary burthen of the project rested upon the Scottish people. They, however, abated not one jot of heart or hope. A number of war vessels were purchased in Holland, and the first part of the expedition, consisting of about 1200 men, set sail from Leith amidst the prayers and blessings of many thousands of their assembled countrymen.

They reached the Gulf of Darien in safety, and established themselves on the coast in localities to which they gave the names of New Calidonia and New St. Andrews. The government of Spain had been perfectly quiet during the agitation of the project, and the arrangements for carrying it out; but no sooner was the expedition arrived at the Isthmus, than—secretly instigated, it was believed, by the English King—it resolved to attack the embryo colony. The unfortunate Highlanders, decimated as they soon were by fever, hunger, and privations of all kinds, could still at all events fight; and Captain Campbell, of Finab, a relative of the Athole and Breadalbane families, who had joined his countrymen with some followers, was chosen to command them. Captain Campbell had served in William's continental wars, and his military measures were prompt and decided. At the head of a few hundred picked men, he made a rapid night-march to Tuburactu, where a large body of Spanish troops were posted, and surprised and scattered them. His victory was a barren one. On returning with his triumphant soldiers, he found the Scottish settlements beleagued seaward by a Spanish squadron. There was no help, and, after a gallant but ineffectual resistance, the surviving colonists capitulated, with the exception of Captain Campbell, who, fearful of trusting to the tender mercies of the Spaniards, escaped overland, and ultimately arrived safe in Scotland. Paterson, who became temporarily deranged by the failure of his project, was amongst the sur-

vivors, and one of the few who regained their native shores. The second part of the expedition sailed before the fate of the first had been ascertained, and the whole affair terminated most disastrously. However much incidental causes might have contributed to hasten the catastrophe—the jealousy of the English merchants, and the bad faith of William III. being amongst the chief of these—the shipwreck of a scheme so flimsily based and rashly undertaken, could by no skill or prudence have been long averted.

Having already occupied more space than we had intended with the history of this country, we devote the remainder of this chapter to a few brief remarks on its topography.

Panama embraces that portion of the great American Isthmus which lies between Darien on the east, and Costa Rica on the west, and contains about twenty-five thousand square miles. It is one of the Provinces of New Grenada, forming the extreme western portion of that state, and is the department known as Istmo, comprising Panama and Veragua.

This portion of the great Isthmus describes in the main a curve, the convex border or coast, looking North, being upon the Caribbean Sea, while its concave, or Southern boundary, is on the Bay of Panama.

The population of the Isthmus, embracing Panama and Veragua, is supposed to be about one hundred and fifty thousand; but this conclusion is

arrived at more from a general calculation, than by any attempts at an accurate census.

The physical aspect of the Isthmus is for the most part mountainous and rugged. Along the valley of the Chagres river there are, however, some very excellent table lands, especially at Peña Blanca and Barbacoa, which it must be almost painful for a farmer to see remaining uncultivated, but more particularly in the vicinity of Panama. Going back from the river, the hills often rise abruptly, but seldom to a greater height than 150 to 300 feet, and are skirted by fertile plains and green savannas, or narrowly divided by ravines, down which flow, during the rainy season, in torrents, the rapidly accumulated volumes of water, to unite with the larger stream in the valley. The soil is mostly of red clay, and does not readily absorb the falling rain, which consequently is shed from the hill-sides as from the roof of a house, causing that rapid rise in the rivers which is so frequently noticed by travellers in this country.

It was formerly supposed that the Cordilleras extended uninterruptedly through the whole of North and South America, being simply greatly depressed on the Isthmus of Panama. But it has been shown by Berghaus, Hopkins, and others, that no such continuity exists. The Cordilleras of the Andes terminate at Darien; and the great North American range probably commences near the Isthmus of Tehuantepec.

Col. Hughes, in his report, says that the two continents, as they formerly existed, are now connected by a series of uplifted hills of variable height, forming a not well defined, but sinuous and contorted ridge, dividing the waters of the Pacific from those of the Atlantic, curving through the Isthmus of Panama in the form of an arc. Upon the slopes of this ridge, and often towering above it, are seen isolated conical hills, sometimes connected with each other, or with the dividing range, by low ridges of land. Nearly the whole of this formation is obviously recent, and of igneous origin. It consists of porphyry, greenstone, columnar basalt, hornblende, and trapean rocks; and altered limestone and granites, changed from other rocks by the action of fire, also occur. A considerable variety of minerals are found, such as copper and iron, agates, chalcedonies, and cornelians; and gold has been discovered in almost every stream, especially on the Atlantic slope; indeed it is not improbable, from the many indications of its existence, that the mines of this metal may prove, on further examination of the country, to be of great value. Where sedimentary rocks are found, it is obvious that they are of still more recent origin than the igneous formations, and have been deposited since the upheaving of the latter, as they abut upon them, without disturbance of their strata, which are perfectly horizontal. Some exceptions to this rule are mentioned, but they escaped the observation of Colonel Hughes. It is almost impossible to resist the

conclusion that at no remote period the two Americas were completely separate, the ocean flowing freely and uninterruptedly between them, and occupying nearly all the space from Tehuantepec to Darien, constituting, in fact, but one isthmus, although known by different names. On the highest peaks, which have been simply elevated by interior force, marine shells of recent origin are frequently found. The forces to which the formation is due, Colonel Hughes supposes to have acted principally in two different directions; the one uplifting the main connecting link of the two continents, and the other elevating the transverse ridges. From these axes other diverging or radiating ridges have been thrown out short distances in the direction of the lines of least resistance. The valley of the Chagres can scarcely be regarded strictly as one of denudation. It is probable that when this country was upheaved, there was no well defined outlet between the summit and the Atlantic, but that the secondary ranges were connected with low narrow ridges, in consequence of which a series of lakes were formed by the first rains, at different levels, falling successively towards the ocean. The accumulation of the water at last broke through these slight barriers, and, in the natural course of things, reduced the outlet to a nearly uniform plane, the highest of these lakes, at a distance of forty-four miles from the ocean, having been but fifty feet above it. The valley of the Chagres has evidently been formed, *not* by the deposi-

tion of earthy substances from the river, but from the decomposition of the rocky hills, (subsequently mixed with vegetable matter,) and a long series of abrasion from the downfall water.

CHAPTER V.

The Rivers of the Isthmus—The Rio Chagres and its Tributaries—The Rio Grande—The Caimito—The city of Panama—Its present and past State—Its Improvement—The Harbor—Porto Bello—Chagres—Gorgona—Cruces—Chorrera, etc.

The Rio Chagres is about one hundred miles long, and, from Cruces down, varies from two hundred to three hundred feet in width. For the first half of its length it flows in a south-westerly direction, nearly parallel to the dividing ridge, to the mouth of the Obispo, and then suddenly changing its course to a few degrees west of north, follows it to the ocean. It abounds in sudden and abrupt turns, and winds around the terminations of the hills from side to side, presenting to the eye of the traveller an ever changing scene of the most gorgeous vegetation in the world. Its most important tributaries are the Obispo, Quebrada, Agua Salud, Trinidad, and Gatun.

The Rio Grande is another large river of the Isthmus, which rises on the dividing ridge, and flows the other way, emptying, near Panama, into the Pacific ocean. The Caimito is also a considerable stream, entering into a bay of the same name about twelve miles to the south-west of Panama. A great number

of other rivers are found on the Isthmus, debauching at short intervals into the Atlantic or Pacific oceans; but little, however, is known of them, unless we accept the imperfect details of contraband traders, who have been upon the coast, or the statements of the natives. It is abundantly proven, however, that during the rainy season any amount of water-power may be obtained in almost every part of the country, for the purposes of manufactures.

The principal towns on the Isthmus, of any interest, are Panama, Porto Bello, and Chagres, Gatun, Gorgona, Cruces on the Chagres river, and Chorrera in the valley of the Caimito. The present city of Panama contains about ten thousand inhabitants, and is by far the most important place in the province. It is an ancient walled town, and bears many prominent marks of its former elegance, and even grandeur, but is now in a great measure in a state of dilapidation and decay. It is situated on an irregular point of land extending into the bay, the waters of which wash it on three sides. It was once a place of great importance and wealth, but had for many years been going to ruin, until within a short time a new spirit of enterprise has been imparted to its inhabitants, and it is now fast re-populating and re-building. Since the tide of emigration has set towards California, this has been made the most important place on the route, and now—its lines of steamships, and a large number of sailing craft, constantly arriving and departing from its harbor, and its streets swarming with busy travel-

lers from every quarter of the globe—it is no longer the half-ruined and deserted city that it was a few years ago, but re-kindled life and enterprise are already marking its onward progress to a better and more permanent state of prosperity in the future. The view seaward from the ramparts is most beautiful. The usually calm and placid surface of the bay, studded with islands clothed in the richest verdure of the tropics, and bearing upon its bosom every species of sailing craft, from a native bungo to the largest class of merchant ships, and majestic steamers, it presents to the eye a scene unlike any other in the known world, and scarcely less enchanting.

Unlike any other place on the Isthmus, Panama is considered healthy, as it may well be supposed, from the fact that its atmosphere is mostly from the sea, and consequently devoid of the noxious exhalations of the back country, in a great measure. Overflowing as it is with travellers, and a transient population, and with imperfect municipal regulations, the first impressions of the place are often anything but agreeable, and particularly so from its extreme filth, the streets being made the common receptacle of garbage and offal of every description, which is allowed to decay or to be removed by swine and buzzards, that are left, unmolested, with the duty of scavengers. One of the greatest detriments to the place is the deficiency of a supply of good water. The inhabitants are now supplied principally from a river three miles distant, the water being brought to the city on mules.

Porto Bello was the next place of importance, but it has now sunk far beneath what Panama ever was, without any hope of being again resuscitated. Its population is about one thousand, and mostly negroes. It was contemplated at one time to make this place the northern terminus of the Panama Railroad, but the route from here was found not to be a feasible one, and consequently the idea was abandoned for the much better location at Navy Bay.

The American town of Chagres, which lies on the west side of the river, may contain six or eight hundred inhabitants. The place was built up to meet the wants of the travelling public, and consequently it is as temporary in its appearance as could be imagined. With the opening of the port at Navy Bay, it must necessarily be abandoned for the want of support. Upon the opposite side, immediately under and behind the high rocky point upon which is built the fort of San Lorenzo, is situated the native town of Chagres, which is little else than a collection of miserable reed huts, thatched with palm-leaf. There are a few, more respectable in appearance and comfortable, with earthen tiles, but all alike are without floors. The walls are sometimes plastered over in a rude way, but usually left open, and they have only a mat suspended for a door. The houses are built quite compactly, and in rows, not more than from fifteen to twenty feet apart; and a walk through these narrow streets, with the views inside, will be likely to present some very novel spectacles to the stranger. The little natives, of both sexes, running

about, with their protuberant bellies perfectly naked, certainly offers an odd sight for a Christian. This place is said to contain one thousand inhabitants, many of whom are Jamaica and Porto Bello negroes, who have gone there for employment as boatmen.

Gatun, which lies upon the west bank of the Chagres river, ten miles above Chagres, is of much the same character. The population is variously estimated from one to two thousand. Upon the opposite shore, and a short distance below, is the railroad station, known by the same name. This is the first point at which the railroad touches the river, and is but seven and a half miles from Navy Bay.

Gorgona is about forty miles from Chagres, in the course of the stream, but probably not more than half that distance in a straight line. This is made the entrepôt for goods in transit across the Isthmus by the river. Between Gorgona and Panama, they are conveyed by mules. There are two or three respectable forwarding houses and hotels, owned by Americans, who are always found courteous and attentive to the wants of travellers. The population is said to be about two thousand. Cruces is six miles farther up, and was once a place of considerable importance, it being at the head of river navigation and on the paved road from Porto Bello to Panama. During the rainy season the road is much better from Panama to Cruces than to Gorgona, and consequently business is in a measure transferred to this place while the rains continue, and boats go up without much difficulty.

Chorrera, lying in the valley of the Caimito, west of Panama, is supposed to contain four thousand inhabitants, and this part of the Isthmus is probably more thickly settled than any other of the same extent. Many other places are laid down on the maps, but they are of little importance.

CHAPTER VI.

The Forests of the Isthmus—Their primeval State—The Palms—Different Varieties—Their Characteristics—The Blossoms and the Fruit—The various Products and their Uses—Indespensable to the Natives.

One of the first things that attracts the attention of travellers in this country, and perhaps impresses them more vividly than any other, is the deep, solemn beauty of the forests. Until recently, the whole length and breadth of the Isthmus, with but few and slight exceptions, has remained the same gorgeous "wild-wood" of huge trees and thickly interwoven jungles that characterized it when first discovered by the Spaniards; and Nature, in all her grandeur, unbroken and undisturbed by the hand of man, has reigned supreme throughout its whole extent. But thanks to American progress, which seems destined to leave no part of this continent without its iron track, the woodman's ax has resounded already through its wild savannas and deep vallies, borne on by the strong arm of enduring enterprise; and it is to be hoped that its sound will never cease, until the sun's light shall fall upon the soil that has so long been shadowed over by these dense woods,

and the light of civilization and intelligence shall break in upon the moral darkness that has hitherto hung over their people, and kept them in the profoundest ignorance and superstition.

That most beautiful of all trees, which is peculiar to the inter-tropical landscape, the Palm, is found here in a great number of its varieties, from the humble plant, so much used in the manufacture of hats, to the Palma Real, which grows to the height of one hundred and twenty feet, and is one of the most majestic and beautiful of the natural productions of the earth. The Cocoanut Palm is far inferior in appearance. It is not so large, and its trunk is more or less curved, especially near the ground; but with its clusters of fruit, in every stage of maturity, it is a marked example in nature of unpretending utility, contrasting widely with its fellow, the Palma Real, of towering beauty, but comparative unproductiveness.

There are a great many varieties of this most interesting class, variously estimated from one hundred and ninety to near a thousand, and it is supposed that there are some not yet described. Several varieties are common upon the Isthmus, but they vary much in different districts. The Palma Real is not seen in crossing the country, until arriving at Barbacoa; while the Cocoanut is found upon the coast, and again at Gorgona, but most frequently near the sea shore, where it grows in great abundance.

The great characteristic of the Palm is its manner of growth, or, technically, it is endogenous. The

circulation is carried on in the centre of the stem, instead of near the surface, as sap, as in our northern trees. The largest palms have no distinct bark that can be separated, nor have they branches, but commence their growth like a common plant. The root of the leaf first encircles the stalk near the ground; within this shoots out another above the first, which it crowds out, and dying, it drops off, and thus every new leaf adds to the length of the trunk. Only a few leaves remain, which are always at the top of the tree; and on some of the palms, these facets, or scars, where the leaves separated, may be distinctly seen after it has attained a great size. The Palma Real is marked by rings, the root of the leaf encircling the trunk for some feet up before it becomes pinnated, and extends off; this part being of a bright green, is one of the great beauties of the tree. The leaves of the larger Palms are all pinnated, or feather-like—a central stem with two rows of narrow leaves on each side. These leaves are often twenty feet long, and the natives split them, leaving a row of the leaflets on each half; and these they bind on the roofs of their houses, commencing at the lower part, letting the leaflets overlap each other, and they form a very perfect and durable covering. The palm from which these thatches are obtained, never grows to a great height, and the dead leaves adhere to the trunk nearly to the ground, giving it a scrubby appearance; while the long leaves at the top shoot out and curve over in a very graceful manner, like the Palma Real and other varieties.

All, or nearly all, of the large Palms bear fruit, which varies more in its character than does the tree in appearance. It is usually clustered, and hangs around the body of the tree beneath the roots of the leaves. The Palma Real, Date Palm, and many others, are very beautiful in this respect, the fruit varying from the size of a blackberry to a lime, usually—the Cocoanut being an exception. I observed some through all their stages of growth, from the blossom to the ripe fruit. An enormous spatha shoots out, and opening, develops an immense number of little white blossoms; these soon fall to the ground, covering it for some yards perfectly white. The fruit of some would be first green, and then yellow; afterwards, when ripe, it would be red, and hang in clusters of several hundred, in the form of an inverted cone, suspended by a single stem. This fruit is a miniature cocoanut, about the size of a medium lime, with its outside shuck, hard shell, and meat. It is eaten eagerly by wild and domestic hogs.

The Date Palm and some others are supposed to contain in one cluster from 12,000 to 600,000 flowers. The trunk of the variety above described is not usually over eight or ten inches thick, but often fifty or sixty feet high, and covered with sharp prickles.

A variety presenting a very peculiar appearance, supported upon aerial roots, is common upon the Isthmus. The trunk is straight and slim, and supported six or eight feet from the ground, by roots that stand out in every direction, and from two to

three inches thick, and covered with sharp thorns. These roots shoot out in a direct course towards the ground, and increase in number according to the growth of the tree, and the consequent necessity of additional strength. I discovered one of these roots when its point had but just entered the ground. It was lighter colored than the older ones, although equal in bulk, but pithy and full of sap. With little effort I broke it from the parent trunk, to which it soon would have contributed its support. So sharp and strong are the thorns on these roots, that the natives use them for graters.

Dr. Rawley, who spent some time in New Grenada, says, that on the Magdalena, a palm plant is very common, which produces an immense fruit, or cluster of seeds, from which the natives extract, by compression, three different kinds of oil. The plant has a long lanceolate leaf, and grows sometimes in the crotches of trees where moss and dirt has accumulated, but usually in the ground. The fruit, when ripe, is red, and appears an aggregation of distinct seed or nuts. These are broken and then pressed. One oil is red, containing the coloring matter of the fruit, and is used in cooking, dressing meats, and to burn; another from the same plant is used for the hair, while the third quality is employed medicinally.

It is said that the natives can subsist alone upon the various products of the family of palms, which also supply them with a variety of luxuries. "Wine, oil, wax, flour, sugar, and salt," says Humboldt, "are the produce of this tribe;" to which Von Mar-

tius adds, "thread, weapons, utensils, food and habitations." The most remarkable is the Cocoanut. The root is sometimes masticated, and of the small fibres baskets are made. The hard case of the stem is made into drums, and used in the construction of huts. The base of the leaf of the Palma Real is made into cradles, and from the fibres they make cloth. The unexpanded terminal bud is a delicate article of food; the leaves furnish thatches for habitations and materials for fences, buckets and baskets. The midrib of the leaf serves for oars, the juice of the stem and flower "is replete with sugar; and is fermented into an excellent wine, or distilled into a sort of spirit called arrack." The Cocoanut alone furnishes food, a nourishing drink, and the shell makes a durable cup. "The juice which flows from the wounded spathas of several varieties, is not only grateful as a beverage, but it is found the surest and safest remedy for constipation of the bowels, especially in delicate females." The finest Sago is prepared from the pith of some varieties of the palm, which yield from six to eight hundred pounds the single tree. The tough, hard fibres are also used to a considerable extent for making brooms, under the name of vegetable bristles. A beautiful material, called vegetable ivory, is obtained from a palm that grows upon the Magdalena. The tree which produces it is near the size of the Cocoanut, and resembles it. The fruit is about as large as an orange, and covered with a thick rough shuck; it is at first a clear fluid, and sometimes drank, but afterwards becomes white and

more consistent, with a sweet taste, and ultimately perfectly solid, heavy and white as ivory. It softens under water, but becomes hard on being removed; it is used for various ornaments, toys, cane-heads, &c. The wood of the different palms is useful for many purposes, and is extensively used for walking-sticks, umbrella-staffs, and various other articles. The palm oil may be extensively obtained, and it not only burns well, but the odor of it is more agreeable than otherwise; in fact, the various uses to which the products of the palm have been appropriated are almost innumerable. Yet it is not to be supposed that any very great variety of them will be observed at any one place, and especially not on the Isthmus of Panama, although it is there almost indispensable to the natives' subsistence and comfort.

CHAPTER VII.

The Forests—Gorgeous Vegetation—A peculiar Tree—The Cedro—Native Bungoes—Different Timbers of the Isthmus—The India Rubber Tree—Method of collecting and preparing the Gum—The Milk Tree—The Calabash Tree—Objectional Feature of the Isthmus Forests.

Although the palms may be considered one of the most distinguished features of the Isthmus forests, yet they are but one of the many trees which constitute the wood growth of this country. The different kinds or species are seemingly innumerable; so much so, that one would readily immagine himself placed in the midst of a vast collection of the vegetable kingdom from all nations, so thickly are they congregated, and so widely differing in appearance. Beside the giant of the forest, two or three centuries old, and measuring in circumference thirty-five and sometimes sixty feet, will be found the spindling trunk, not more than two or three inches thick, yet stretching away to a height altogether out of proportion to its size, to reach the sunlight which occasionally comes shimmering down through the green canopy above, in bright streams to entice it on its way. Nor is this all; each sturdy trunk will

be made to bear some parasite or creeping vine, that, having climbed to its topmost height, will shoot off branches earthward, that will hang like cords, suspended in mid air, until reaching the ground, to take root. These vines sometimes so encircle a trunk, that it dies, strangled apparently by that which it had supported, and finally, rotting away, it will fall with its burthen, and crumbling to dust, leave a hollow cylinder of interlacing strans.

Countless numbers of parasite plants will be seen clinging to the barks, or around the branches and in their angles, bearing most beautiful blossoms; and thus each tree not only appears in its richest verdure, and perhaps in gorgeous bloom, but decorated with innumerable other specimens of the Great Artist's handiwork, in this grandest of all his exhibitions in the world.

One of the most peculiar trees of the Isthmus, and one that is often found growing to a great size, is that so strongly sustained in its position by planes, thrown out from twenty feet or more up the trunk, which become rooted in the ground at perhaps an equal distance, thus bracing it on every side against the violence of winds or the gravity of its own great bulk. Two or three varieties of the mahogany tree, and a cedro or cedar, from which the natives usually make their canoes, are among those most commonly seen; they both grow to a great size, especially the cedro. Large boats, called bungoes, from forty to fifty feet long and of several tuns burthen, are made from a single tree. They are very

good sea boats, and rigged with sails; the natives often go between Porto Bello, Navy Bay, and Chagres, with them. Mr. Stephens has given an interesting account of a trip he made, of several days' duration, along the coast of Yucatan, in one of these vessels, and I have been creditably informed that a steam engine was put in one at Panama, and it operated well.

The most reliable account of the timbers of the Isthmus and their practical utility, is from the pen of Wm. H. Sidell, Esq., who was at one time an engineer on the Panama Railroad. He took great pains to inform himself from persons of experience, who had been several years in the country. Of the timbers of the Isthmus, Mr. Sidell says:

"It will be seen that the names are nearly all local, and there is so little similarity to the woods with which we are accustomed, that I cannot attempt to classify them with our timbers.

"*Guachapalè.*—Is a large tree found in abundance; the timber has something the appearance of oak, and is durable under ground.

"*Macano* or *Cacique.*—Is a crooked tree, and generally of middle size, though sometimes large. It does not readily decay under ground or in the water. Stakes driven fifteen years since, and washed alternately by salt and fresh water, show no signs of change. *Espino Amarillo.*—Is not very abundant. Is good for constructions in water. The wood is of yellowish color, straight grained and easy to work; it is of light weight and not liable to decay,

or to the attacks of insects. There are seven kinds of amarillo, all of which are considered good timber.

"*Cedro Espino.*—This is a large tree, the trunk straight and the timber not heavy. The heart-wood alone is good, and this stands well in the open air, or under ground, as well as in interiors. It is the kind commonly used on the Isthmus in making boards. *Cedro Cebolla.*—Large tree, rather crooked; in other respects similar to the espino. The curate of a village on the Isthmus assured Mr. Hutardo, that the trunk of a fallen tree, lying partly in the water, had been used by his people as a bridge from time immemorial.

"*Cedro Amargo.*—Is a large tree, easy to work, and stands well in the open air. *Nispero.*—Is a large tree and not easy to work; stands well when not exposed to sun and rain. Insects do not touch it, but it is liable to rot if exposed to the inclemency of the weather. It is esteemed for its resistance to transverse action. There are several varieties, amongst which the *Nispero real* and *Nispero de Montana* are most esteemed. The sapadillo is said to be identical with the nispero, and there are frequent instances of the great durability of this wood. At the castle of San Lorenzo, near Chagres, and amongst the old works at Porto Bello, are great quantities, which have endured, under various circumstances of exposure, for half a century and over. The timber resembles the cherry of the North—about the same color, hardness, and weight. It is quite straight grained and a very fine timber.

"*Quira.*—Very fine wood, tree large, timber hard, heavy, and difficult to work; resists friction. It is much used. *Guayacan.*—Large tree, hard, heavy and difficult to work, but very strong; is much employed in building. If left on the ground and exposed to the open air, it petrifies, becoming a silicious stone, retaining the appearance of wood. The conditions on which this petrifaction depends are unknown. The figures of the apostles, which are in front of the cathedral at Panama, are of this wood. They are not less than from 35 to 40 years old. It is the same wood known to us by the name of lignum vitæ.

"*Algarobo.*—Is a large tree, hard and heavy wood, of red color. If properly seasoned, it lasts many years, exposed to the inclemency of the weather; it is very abundant. *Mangle Caballero.*—This wood is considered as good as nispero; it grows generally near the water's edge, is found in great abundance, and will give pieces from 35 to 40 feet long, and a foot square. *Alcornoque.*—(Cork-tree.) A very large tree; will give large beams, and wears well. *Mal-vicino.*—Is so named by the natives, from its extreme hardness and great size. The color of the wood is yellow. It is found in abundance, and, as it wears well, it is much employed in building, notwithstanding the great expense of cutting.

"*Caoba.*—Trees very large, wood not heavy, and easy to work; stands well under a roof. If not properly seasoned it becomes brittle; for this reason carpenters object to its use; it is mahogany.

"*Roblè.*—Trees large, wood light, and easy to work; stands well in the open air. On the whole, it may be considered a good wood. There are two varieties, one of which is not much esteemed. *Corotu.*—Very large tree, light wood; used for making canoes; not good for general purposes. *Cedro Bueno* and *Cedro Passaya.*—Are cedars, but the least esteemed of the species. They are, however, sometimes used. *Cubo—Mora—Copè.*—These trees are abundant, but useless for the purposes of construction. *Quipo.*—The laurel, however, is tough and elastic, and, when dry, is used for masts.

"*Torro—Cocobollo—Nazareno—Narangito—Totuna.*—The first three woods named are very beautiful, and are used in cabinet-making. The narangito and totuna are fine, strong woods, fit for the purposes of the wheelwright. Totuna is white, and resembles hickory; mortices made in it never split. The tree, however, is small and of irregular growth. *Cano Blanco.*—This cane, cut open and cleared of the loose fibres, furnishes the cheapest and the best known lathing in the country. Under a roof, if properly seasoned, it will stand 30 or 40 years without injury. *Espabé.*—Is never used, although it is very abundant and the trees grow to a great size. A Mr. McGregor once erected a saw-mill, and cut great quantities of plank from espabé, but it was a failure, as no one would use them.

"*Algagia — Nispero — Nazareno — Madrona de Montano—Amarillo de Guayquil.*—All these woods are much esteemed, because they can be safely made

use of while the tree is still young, and measuring but five inches square.

"It is the universal opinion of the country, that the quality of the timber is influenced by the time of cutting, in regard to the age of the moon; and as the same opinion is prevalent in our own country, and in Europe, although regarded by engineers as fallacious, I will give the strongly expressed ideas of Señor H—— on the subject:

"'It is a fact, within my own observation, that no wood should be cut before the moon is full. I paid little attention to this popular belief until I found, by experience, that such was really the case. Insects will attack wood that will not be touched by them if cut after the full moon. This is very evident, if the wood is of a light and spongy nature. Some vegetable productions will prove this in a most striking manner, thus. If our common thatch be gathered under a new moon, it will rot in a few months, and be attacked by worms; while it will last from fifteen to twenty years, if gathered at the full moon. Those who many years ago built houses in this country, are now most particular in selecting their woods after this manner.'"

Two varieties of the manzanilla, or manchineel of Lindley, the india rubber and the palo de vaca, or cow tree, so particularly described by Humboldt, are to be found here, but to no very great extent. They all belong to the same order, and include the bread fruit and famous upas. Each discharges, when cut into, a white fluid; the india rubber, or

caoutchouc and palo de vaca being the most remarkable.

The india rubber, which has become so important an article in the Arts, and of domestic use, is obtained by tapping the tree, much as the maple is in New England. The juice issues, of a white, creamy consistence, and, when designed for exportation in the crude state, it is poured into long troughs, where the elastic particles arise to the surface, leaving a dark aqueous fluid beneath. In this way the india rubber becomes sufficiently hard to be taken off in thick sheets. When converted into any particular shape, as shoes, bottles, etc., as it usually is by the natives, they prepare the moulds by smearing them with clay, and being furnished with handles, they are dipped into the liquid india rubber, and then held in the smoke over a fire of oily palm nuts, to dry, and become black. This process is repeated until the desired thickness is acquired, and then they are exposed in the sun to harden.

The milk tree, I am disposed to think, is not very common, yet there can be no reasonable doubt of its existence. Humboldt describes it as yielding a large quantity of delicious milk, equal in quality, and possessing many of the characteristics of cows' milk, and says," It is at the rising of the sun, this vegetable fountain is most abundant; the blacks and natives are then seen hastening from all quarters, with large bowls to receive the milk, which grows yellow and thickens at the surface."

Lindley confirms this marvellous account, and

says that it has been analyzed by a number of Chemists and found to contain 30.57 per cent. of galactin. Capt. Charles Cochrane, of the Royal Navy, and Dr. Webster, surgeon of an English sloop, have both described this tree, and speak of it in nearly the same terms.

The manchineel is of two varieties, one of which is poison. It is common on the island of Manzanilla.

The calabash tree is quite common. It is about the size of a peach tree, and presents a peculiar appearance, with its enormous green, shining fruit, which often hangs from the extreme end of a limb, bending it towards the ground. Mangroves usually grow along the coast, forming an almost impassible barrier. The principal trunk often lies horizontal, giving off aerial branches with bulbous extremities, which take root in the muddy soil beneath, and thus extend along to a great extent, like the banyan tree. From the number of valuable timbers above described, it would seem that there could have been no necessity for exporting piles and crossties for the Panama Railroad, yet it has been done. Whatever may be said of the forests of the Isthmus, there is no timber which can ever supply the place of the northern pine and cedar; which are accessible in great numbers, from a small surface; while on the Isthmus it would seem that the greatest possible variety were crowded into a given space, and, consequently, such timbers as are valuable are more or less scattered.

CHAPTER VIII.

Agricultural prospects of the Isthmus—Its Natural Productions—Cotton—Sugar-Cane—Tobacco—Plantains, Bananas and their Cultivation—Fruits—Chirimoyers—Pine Apples—Alligator Pears and others—Medicinal Products—The Natives' Antidote for Snake Poison—Castor Oil Plant—Ipecacuanha, Sarsaparilla, &c.

It is not much likely that the Isthmus of Panama will immediately become, to any very great extent, an agricultural district; yet, probably, nowhere would the earth yield a greater variety of her useful products than here. Nor is it hardly possible that greater inducements could be presented to the cultivators of the soil than are now offered on this Isthmus, not only from the present and increasing demand for such products, but from the bountiful harvest that could be obtained from the richly productive soil. It will take a long time before the public will view this little neck of land in any other light than a very objectionable portion of the earth, to "get over" on the way to California; yet it is worthy of a much more general consideration.

Of the agricultural productions of this country but little can be said, for but little is known about them, and that little, many times, is vague and un-

certain. It is said that wheat will grow well in the high lands, yet few experiments have ever been tried with it; but corn is well known to produce abundantly, and with so little labor that the natives make it one of their chief crops, and its easy growth requires no better evidence of the fact. Rice grows well in the low lands, but is not much cultivated. Cotton and sugar-cane are sometimes to be seen in the native rosas, but not often. Up the Magdalena river, tobacco is produced quite extensively, and it grows thrifty on the Isthmus, but it can never be of good quality without a better system of cultivation than it has ever had here. Coffee and cocoa are both grown to some extent, and so are yams and sweet potatoes; but the natives are so indolent that they seldom take the trouble to plant them. Yams are brought to the Chagres market from Carthagena, in considerable quantities. Plantains and bananas are not only the easiest grown, but they yield the greatest amount of valuable fruit of any known vegetable production. The plant is very beautiful, with its broad, green leaves, the roots of which clasp the stalk, reaching to the ground. Each leaf, as it shoots out, is a closely rolled cylinder, pointing directly upwards until it unrolls, when it gracefully bends to one side. The stem of the fruit is the termination of the stalk, which expands and finally bending over, the flowers are developed in rows around it, succeeding each other gradually, from the base to the apex, which by this time usually hangs directly down; and as the fruit is developed, it turns up and

back towards the stem. Maintain the stem in its natural position, and the fruit would point up towards the apex of the cluster, instead of turning back as we always see them. A bunch of bananas will weigh from twenty-five to fifty pounds, and four crops may be grown in a year; so that at least a hundred pounds of fruit is yielded by a single plant, annually. When the head of the banana is fully grown, it should be cut off and hung away to ripen; while the stalk must be cut off close to the ground, that it may sprout out anew, or else the root will die. Plantains resemble bananas so faithfully that they are not always readily distinguished, yet they are not either as palatable or wholesome, unless boiled, baked or fried, which are the usual methods of cooking them.

Several varieties of beans, are grown to some extent, as well as peas, squashes, and other vegetables of the same character. A species of agave, called peta, furnishes a very strong fibre for cordage. It is of this that the net hammocks are usually made, and I am told that it is very abundant in some parts of the country.

In no place can the delicate fruits be more easily produced, nor in greater variety. Besides such as we have already described, the orange, lemon, lime, pine-apple and mango are found growing wild, in small quantities, or more abundant even under the indifferent cultivation of the natives. Sapotes, guavas, and the delicious chirimoyer also grow wild throughout the forests. The chirimoyers are of two

kinds; the one is sweet, while the other, and much the larger, is pleasantly sour. The sweet variety is about the size of a large orange, and so like a custard that it is called the custard apple; the other, or sour fruit, is as large as a quart cup, elongated, green, and quite rough on the surface. Their substance is so delicate that it is most conveniently eaten with a spoon.

The alligator pear is another very delicious fruit, very common in the market of Panama; indeed, there is seemingly no end to the various different productions of this class, which grow spontaneously, or may be produced with little labor; yet they are now found but in limited quantities, so much so that it has been doubted by some who have been upon the Isthmus that they existed there. Nearly all I have so far mentioned have come under my observation, and many not here mentioned have still been spoken of by others. All the soil of this country wants, is cultivation, to make it the garden of the world; this is evident from the great variety and gorgeous character of vegetable life every where to be seen.

The medicinal products alone are a numerous and valuable class; yet they cannot be considered but in a limited extent, known.

The great remedy, or antidote, for the bite of venomous reptiles, (*simaruba cedron*,) which has recently attracted so much attention in Europe, was first discovered on this Isthmus, and has been for a long time in use among the natives. The seeds are

first scraped and then macerated in spirit, with which the wound is to be washed, and the scrapings bound on to it. The dry powder sprinkled into the wound would probably be quite as effectual. The natives hold this article in high estimation, and are seldom without it. The castor oil plant (*oleum ricinus*,) grows along the banks of the Chagres river, and probably throughout the country. The natives extract the oil for domestic use. Ipecacuanha is found abundant on the Magdalena, and probably it is indigenous on the Isthmus; also, several varieties of the cinchona, but they are said to yield but a very small per cent. of quinine, on which its virtues depend. The Mendingo Indians gather large quantities of fustic and other dye woods, which they dispose of to contraband vessels, and therefore no account is rendered of their exportation. The vanilla bean grows here, but it is said not to be of the best quality; probably it has never yet been properly cured.

The Valiente Indians gather large quantities of sarsaparilla from the savannas of Costa Rica, and of excellent quality.

CHAPTER IX.

The Inhabitants of the Isthmus—What Nature has done for them—Their Food—Clothing—Means for travelling—Mestizoes—Their Character—Distinction from the Boatmen—Sas Blas Indians—Mendingoes—Their jealousy of Foreigners—Their Productions and Trade—Their method of catching Fish and removing the shells from Turtles—The Landholders and their Landmarks—Rosas—Native Hotels—Dress of the Women—Smoking—Their Children—Their Ideas of the Future.

PROBABLY no class of mankind are more perfectly satisfied with themselves, and contented in their situation, than the native inhabitants of this country. Nature has lavished upon them some of her richest gifts; has given them a climate of constant summer, thus enabling them to adopt the simplest habits of life; and not only planted, but rears and ripens, unaided, some of her choicest productions for their use. So bountifully are these people provided for, in this way, that they seem to be altogether free from any care for the future; and thus relieved so entirely from that powerful and necessary incentive to action—self-preservation, they lead a life of listless indifference, emphatically the spoiled children of a too indulgent parent.

A few days' work will enable them to erect a house that will last many years, and one that they prefer to any other. A few dollars will supply wearing apparel for each person a year; as it consists, at the best, of little more than a pair of light trowsers, a calico or flannel shirt, and a palm-leaf hat. To obtain food, they have but to set their nets in the rivers to catch excellent fish, or kill an ox and immediately cut it into strings that it may dry and become "jerked beef," which will last months; or pick bananas and plantains, which are usually found growing about their habitations, and these, with a few others, will suffice for all their wants in this respect. If they wish to travel, they have but to fall a tree upon the bank of a stream, and hew it out, and they have a vessel with which they can not only traverse numerous rivers, but may go from port to port upon the coast. With a grass mat for a bed, an extra shirt, a net satchel for their pipe, tobacco, tinder box, and a few other articles, but more than all else a macheté, and they are prepared to journey for any time. Such is then, briefly, the present condition and habits of the provincial population of the Isthmus of Panama.

The aboriginal inhabitants were Indians, and there are distinct tribes of them who maintain their independence to this day; but in all those places where the Spanish made settlements, they were subdued, and finally, with the remnant of their conquerors, they have become so intermingled, that they now constitute a distinct class, called Mestizoes.

They retain the Spanish dialect, but speak it, however, imperfectly, it being more or less confounded with provincialisms. In their habits they are peaceable, inoffensive and hospitable, although on all thoroughfares they soon become distrustful of Americans, from the manner in which they are often treated; no distinction being made between them and the class of boatmen and porters one is usually obliged to contend with, who travels between Chagres and Panama; the last being principally from Jamaica and other places, either negroes or a mixture of negro and Indian blood. These are mostly a set of despicable vagabonds, and deserve neither kindness nor forbearance. The qualification they most esteem is an ability to cheat; in a contract, they are obedient in promises, but when once they have shoved their boat from shore, they claim the right of exemption from engagements made on land, and treat with dogged insolence any attempt to urge them from their purposes.

The San Blas Indians, who occupy the country bordering on the bay of that name, were never subject to the Spaniards, and entertain towards them a most inveterate hatred to this day. As might be expected, they are exceedingly jealous of their independence, and will allow no European to cross their country, or settle upon it. This arises from the tradition of former Spanish aggressions; and, esteeming their country as an especially favored part of the world, they are ready to suspect from any who visit their coast, a design for their extermination. The Men-

dingo river enters this bay, at the mouth of which there is an Indian settlement, and the inhabitants are consequently known by that name also. They are a hardy and somewhat active race of people, with rather broad chests and low foreheads, giving them an ugly expression. They are very careful of their women, for whom they provide liberally, giving each wife a separate house to live in, when they have more than one, which is frequently the case. This has been considered the ground of their objection to Europeans, as they are known to be opposed to the improvement of the species by mixed blood. The women are said to be modest and amiable, but as they are never without a watchful eye over them, it is difficult to judge of their virtues. Their complexions are usually clearer, and they are otherwise better looking than the males, especially when young. The native costume consists of a cotton skirt or wrapper, of their own manufacture, and usually colored with blue, reaching from their shoulders to a little below the calf of the leg, and a piece of the same thrown over their heads, reaching below the breasts. They are very fond of ornaments, such as ear-rings, necklaces and wristlets of coral or beads, and sometimes they wear rings in their noses. The hair is long and black, and usually fastened upon the tops of their heads, or braided and left to hang down their backs.

Ornaments and various articles of dress are now obtained to a considerable extent from coasting vessels that visit them to exchange such goods for fustic,

sarsaparilla root, turtle shells, and some of the more expensive woods. Their trade is usually carried on at one of the islands or keys in the bay, to which they convey their articles of exchange. Hogs, fowls, turtles, and the usual variety of tropical fruits are to be obtained here in considerable quantities. These people often visit Navy Bay and Chagres with these articles to sell.

Spanish vessels usually keep clear from this coast, for it is well known that no quarter would be given them if they should fall into the hands of the Mendingoes. Indian corn, plantains, bananas, cassava, and other articles for domestic use, are grown by them. The men cut the trees, excepting always the cocoanut, and partially clear the ground, while the women and children plant or sow, and cultivate the crop. After the first harvest they set fire to the dry stocks, which burn with the fallen trees, leaving the ground without obstruction for a future use. Fishing is followed as an occupation, to some extent; large fish are often shot in shallow water, with arrows. The turtles are of excellent quality, and in great quantities. The hawk's-bill turtle is taken alive, and a fire kindled upon its back, which is allowed to burn until the pieces may be easily removed, care being taken not to allow too much heat, lest it spoil the shell. It is said that this treatment is sometimes survived, and that the shell is reproduced in one continuous piece over the whole back.

In the vicinity of the Chagres river, many of the natives own large tracts of land, but with very

indefinite boundaries. A native named Sipreon, at Bujio Soldado, claims all that can be seen from the top of a large tree near his premises, although it would be utterly impossible for any one to attain that position in order to ascertain the extent of his possessions. These landholders usually have a rosa, or plantation back from the river, where they grow sugar-cane, indian corn or maize, plantains, bananas and the other fruits and vegetables for their own consumption, and to sell on the river; many of them entertain boatmen, or whoever else may find it necessary to obtain such food or shelter as they provide.

From what has already been said, it will be evident that the habits of these people are irregular and indolent. Of their sports, the fandango is by far the most common; and they sometimes go a great distance to attend this nightly revel. Hunting and fishing are occasionally resorted to for pastime or profit; but the last is practiced but little in the interior, although the rivers abound in excellent fish.

The women wear a dress usually made from calico, gathered about the neck, and with flounces near the bottom; the neck of it, however, is often unloosed and turned down to the waist, leaving the shoulders covered only by the chemise. The palm-leaf hat is also worn by them, while their feet are generally naked, although sometimes they wear shoes, but no stockings. Smoking is an almost constant habit with them, as well as with the men, be-

ing the first thing in the morning, and last at night. The cigar is principally used; which is made by the women, and very mild.

The mothers seem fond of their children, and manage to raise great numbers of them; the youngest one is usually found resting on its mother's hip, with its legs clasping her waist, and supported there by the arm carried behind its back; while the older members of the group are usually occupied with holding their great toes. They manifest, as a class, but very little interest in improvements, and evidently consider a life of indolence the happiest, and have little idea of freedom, except in the permission to do as they please.

The Spanish descendants and Mestizoes of the Isthmus profess to be Catholics; but they have very limited ideas of a future state, as well as of this, and are apparently as indifferent as they are ignorant. When sick, they bear it without a murmur, if free from pain; and if they expect to die, they require to be dressed in their best apparel, possibly with the idea of appearing as respectable as possible in another world, where they all expect to be much happier, and more generously provided for, than here.

CHAPTER X.

The Domestic Animals—Cows—Horses—Mules—Hogs—Fowls—Dogs—Wild Animals—Monkeys—Wild Hogs—The Tapir, Ocelot, Jaguar, Bears, &c.—Birds and their Habits—The Toucon—The Parrot Tribe—The Scarlet Macaw—Humming Birds and their Habits—Aquatic Birds—Reptiles—Alligators, Boa Constrictors, Ignanos, &c.

The domestic animals of the Isthmus are horned cattle, horses, mules, hogs, and fowls. The cattle herds are quite numerous; every native who owns land keeps a drove of sometimes fifty or a hundred, which they value at forty or fifty dollars a head, their currency, being equal to thirty-two and forty dollars our money. They are smaller than the average of North American cattle, but hardy looking, and tough beyond a question, even after having been subjected to the usual processes of cooking. The natives seldom ever milk their cows, and when they do, it will be so irregularly that they soon cease to afford milk sufficient to reward them for the trouble.

The horses are small but enduring, and often of a very perfect figure. They are not numerous, as mules are principally used. Neither are kept to any great extent, except between Gorgona and Panama,

where mules are used altogether for crossing the mountains on that route.

The hog seems to be a favorite animal among these people, and the filthy grunters are found at almost every ranch. They are a long nosed, ugly looking beast, but require no care, as they find an abundant subsistence from the various nuts and vegetables in the woods.

Chickens are raised to a considerable extent, and their eggs are highly prized; at least I have known two dimes to be charged a piece for them, although the usual price is but a medio.

I must not forget to mention that faithful follower of man, the dog, in this connection, although not always a very agreeable companion. Several varieties of the species are common on the Isthmus, and they are great favorites with their masters, who allow them to share equally with them in household privileges.

The monkey is by far the most conspicuous among the wild beasts that inhabit the whole range of the dense forests of the Isthmus. Every where their hideous howlings are to be heard, especially at night fall, or immediately preceding rain. There are many different varieties, and a large, black, bushy headed kind, quite common, will roar like a lion, and is often taken for that animal, at first sight, by strangers. These animals present as differing physiognomies as men, and vary as widely in color; some black, some red, while others are quite light complexioned, and I have no doubt far

more respectable monkeys than their colored brethren of the forest. The red kind are said to be the most noisy, but from the serenades we were favored with, I should judge that it took all classes to make the nights so hideous.

Two kinds of wild hogs are occasionally to be found; one with a long snout, and having two large tusks projecting from the lower jaw, which renders them very ugly looking, but otherwise not differing much from the common domestic animal. The other is shorter and of a gray color, with its bristles or long coarse hair standing out, giving it a scrubby appearance. The flesh of the last is particularly esteemed by the natives.

The tapir is a solitary animal, intermediate between a hog and a hippopotamus, both of which it in some respects resembles. It is sometimes called the hippopotamus of the New World, being like that animal, not only in appearance but in its disposition and habits, although not larger than a small cow. One was killed at Bujio Soldado, and its flesh was found equal in quality to the native beef. It has a long slender nose, forming a sort of probocis capable of voluntary contraction and extension. It is inoffensive and timid, fleeing from, rather than resisting danger. It sleeps during the day, and feeds at night, wholly on vegetables; its skin is very thick, and when dried will resist an arrow, and is used by the natives to make sandals. The ocelot, jaguar, bear, and deer, are said to be occasionally seen, but they are by no means common. Sloths and several species

of the oppossum are quite numerous; also the ant-eater, a remarkable animal that subsists entirely upon that insect.

The birds of the Isthmus are very numerous, and embrace some of the most interesting varieties. Many of them are migratory, leaving at the commencement of the rainy season for the dry atmosphere of a more southern climate, where they abound in still greater numbers in the forests of Brazil, Paragua, and other places. I did not have the opportunity of observing but a comparatively small number, and among them were swallows, whippoorwills, several species of hawks, wild turkeys, partridges, cuckoos, wood-peckers, turkey-buzzards, &c. The toucon is a very interesting bird, and very common. It is remarkable for the large size of its bill, it being from four to five inches long, but very celular and consequently light; the tongue is long but slender, and barbed at its edges, so that when it swallows, it is obliged to throw its head back, or toss its food up in the air, and catch it deep in the throat as it falls. It subsists on fruit and insects. The plumage of the different species varies much, but it is often very beautiful, embracing the crimson, yellow and blue colors, which are more or less blended; while some are principally black, with green and other shades, and a red band about the neck.

The parrot tribe embraces a number of varieties, of which the common green parrot and paroquet are the most common, while the macaw is the most

beautiful and least frequently met with of any. The scarlet macaw is the most splendid, not only from the beauty of its plumage, but its size, being the largest of the tribe. The head, neck, breast, belly, thighs, and upper part of the back, is of a bright red or scarlet color. The quill feathers of the wings are of a fine blue, externally, and of a faint red on the under side, rendering it truly one of the gayest looking objects of the tropical forests; while the paroquets seem to insist upon their right to the character, by keeping up a lively and almost constant chatter.

Great numbers of humming birds are to be seen flitting about among the flowers which supply a never failing harvest for them, as well as the honey bees of the Isthmus. Wherever a flower is blooming, either in the dense forest or in the open field, these little gems of animated nature may be found darting about, or apparently suspended in mid air, with their slender bills insinuated into its deep chambers, extracting its sweets. They vary much in size and appearance, some being as large as a wren, while others are scarcely of the size of the humbler bees which hover about the same flower, and with which they are sometimes seen engaged in fierce combat, apparently contesting the right to its delicious treasure. The different classes combine all the hues of the rainbow in their plumage, and often many in the same bird. They usually suspend their tiny nest upon the twig of a tree, and feed upon the little insects and sweets of flowers.

The aquatic birds most common are herons, cranes, pelicans and ducks, which are found upon the inland streams and along the coast.

The class of reptiles embraces a great variety of formidable and poisonous animals, such as the alligator, which is found in the marshes, and along the rivers, in great numbers; the boa constrictor, although not common, is yet occasionally seen, with a great variety of other snakes, lizards, guanas, &c. The guana, or iguana, belongs to the class of lizards, but differs from them in many particulars. They are often found three or four feet long, and move about with great velocity, equally expert upon land, in the water, or upon the branches of a tree. Some of them have projecting spines along the back, and flat tails like an eel, with which they move themselves through the water. They lay their eggs in the sand, and leave them to be hatched by the warmth of the sun. The natives sometimes cut them open and remove their eggs, after which they are said to recover. The flesh is as delicate as a chicken, and very much liked by some persons.

Frogs and toads are said to be very numerous, and of enormous size upon this Isthmus; yet I saw but very few, although I was there during the whole of the rainy season, when such animals are most rapidly propagated. Although numerous and venomous as reptiles are, not a single serious wound occurred that came under my observation, among all the men employed upon the public works, although constantly exposed to them.

CHAPTER XI.

The Insect Tribes—a Forest Walk—An Ant's path—Their Habitation—Manner of Working—Queen Ant—Their System of Government—Rules of Warfare—The Comijens—Their Distinctive Habits—Butterflies—Moths—Tarantulas—Scorpions—Fire-Flies and Lantern-Bugs—Sand-Flies and Fleas—Garapattas—Chigoe or Jigger—Musketoes, &c.

The inter-tropical regions have ever been recognized as furnishing the favorite abodes of the Insect tribes, and the section under consideration has not been neglected nor passed over by them.

Imagine yourself, friendly reader, in company with the writer, on an excursion into one of the deep wilds of the Isthmus forest. The sun shines brilliantly, and the deep foliage, as you look up, seems one vast transparency of varying green, garnished here and there with gorgeous flowers, around which the humming bird and humble bee are fluttering and flitting away. The noisy chatter of a flock of paroquets has ceased, and it is only the occasional notes of some one of the many songsters of the field that is heard; and all would be profoundly silent, were it not for the murmur that is constantly falling pleasantly upon the ear, the united melody of countless

myriads of animated things, all basking in the same sunlight that enticed us forth; when a locust strikes his lyre, and the mind is turned from its contemplation of the music of insects, to the rough grating of the scissor-grinder.

As we walk along we come upon a path eight or ten inches wide, and perfectly clear of vegetable matter; and on observing, it will be found traversed by great numbers of ants, either black or white, and nearly all going one way, bearing burdens, probably a piece of green leaf the size of a dime, and upon this, perhaps, one or more smaller ants, while the travellers in the other direction will be after the same. Interrupt, or in any way obstruct this thoroughfare, and the little creatures will first come up on each side, and after surveying the obstacle, turn back, and communicating with those they meet, a force will soon be collected, which will set to work and remove, or prepare a new way by the obstruction. Following the laden ants we come to a rivulet, and along this to where a tree has fallen across, we must find our way, for our pioneers have made a bridge of it, and thus for many rods may we be led along, until at last, perhaps, they climb a tree, and leave us to view their habitation suspended from a branch far above our reach, or else we find ourselves beside a mound with towers, or unequal elevations. If curiosity predominates over humanity, we will carefully cut this down through the centre with a macheté, and moving one half away, we shall find near the middle and at the bottom, a large cell con-

taining the queen ant. On examination, this individual will be found enormously distended with eggs, which she deposits in great numbers daily, and which are removed by the working ants, who find ingress and egress to this state apartment through small apertures for that purpose, and for supplying their royal leader with food; for she is a prisoner for life, dependent solely upon her subjects. The larva, or eggs, are deposited in ante-chambers and ultimately mature, and being provided with wings they take their flight in a swarm like bees, but finally become separated, and each female ant choosing a location, is made the nucleus of another community. She first casts off her wings and builds her own tenement, which is at first very small, but wandering ants adopt her as their sovereign, and relieve her from all duties but to furnish subjects, which she does at a rate beyond the comparison of any other animal. Fortunately for other animated species, these young ants, in their first flight, are mostly destroyed by rain or birds, and other animals. I have known them to accumulate on a window in the evening in immense quantities, to which they were attracted by the light of a candle, and on the following morning they were mostly found dead on the ground beneath it.

These commonwealths of ants appear to be governed by the most perfect system; they have not only a king and queen, but are said to be divided into soldiers and laborers; the first acting as a body guard to their majesties. These white ants wage

war on the colored race, and make slaves of them, and those seen upon pieces of leaves, being conveyed away, were probably captured subjects taken after an engagement. The white ants of this country correspond very nearly with the termits of Africa, described by Smeathman; they are called here comijens; and if they once get engaged upon a piece of timber, they seldom leave it until it is rendered worthless by their ravages. An exceedingly minute red, and also a black ant, is found very troublesome here. They build a covered way upon the inner walls of a building, and establish their colony in the upper part of the house, and thus you often find them neighbors in your domicils, and probably bedfellows. They are evidently omniverous, being readily attracted by anything sweet, and also exhibit a bad taste in attacking dead animals. A beautiful bird I had obtained and laid away for a short time, was immediately covered with them, and in a few hours it was stripped of the small feathers and down, which were scattered for several inches around it; from whence they came I could not discover, but I was careful that they did not return the same way, for having destroyed my specimen.

They are indefatigable in their determination to pursue any course upon which they have started. For more than a week I caused the progress of a community that attempted to build a passage way through my room, to be interrupted daily, but each succeeding night it was rebuilt.

In contemplating these wonderful little creatures,

we have wandered in our remarks from the settlement we had broken in upon, and so it is absolutely necessary to do practically, or we receive the most positive demonstration of their ability to seek out and punish their enemies. When we can obtain the opportunity to examine through the various apartments, windings and ramifications of these industrious communities, the mind is at once impressed with the stupendous character of their habitations and highways compared relatively with anything ever accomplished by human hands, or contemplated by the mind of man.

The sun by this time is beclouded, or perhaps is getting down behind a high mountain in the west; the monkeys have commenced their howlings, and the moths, which are numerous, and often measure three or four inches over the tips of their wings, have started out from their hiding places, while the gaily colored butterflies, so beautiful, and of many varieties, are looking up their night quarters. The music of the insects has ceased, or rather the field is now occupied by another, and differently toned choir, while we start on our way homeward; but as there is yet time, we will look up a few specimens on our way. The moths are better caught by candle light, and the butterflies have a perplexing habit of keeping out of our way, although we would rush almost any where to obtain one of the large blue ones that we so frequently see. So, therefore, we will content ourselves in turning over pieces of wood and stones in search for spiders, and we may turn up a large

black tarantula, that will be well worth saving, or pull down the leaves of a large plant, and likely enough a scorpion will come to light. The sting of this animal is very painful, and the bite of the tarantula is said to be fatal to life, but probably not as much so as the red species of Mexico.

Arriving at our quarters, we sit down in the veranda, and, with the disappearance of daylight, watch the fire-flies and lantern-bugs as they appear. The last are numerous only at times, and differ from the common fire-fly in being much larger, and giving out a constant phosphoric light from two points on their heads, and so exceedingly brilliant that four or five of them, under a glass, will produce light sufficient to read by. Many other nocturnal insects will be constantly flitting about, which, with sand-flies and fleas, will soon convince us that it is time to seek more perfect repose. But before attempting this it is always best to make a physical examination of not only the chest, but the whole body and extremities; and more than likely a pair of delicate forceps will be called into use, in order to pick off the garapattas, a kind of wood-tick that has transferred itself from plants to us; or, if you have been in the country for a few weeks, perhaps the toes will be found festered on the ends, or these white pimples will appear in other parts, and on examination a little nest of eggs, scarcely perceptible to the naked eye, will be discovered. These are contained in a little sack, which it is desirable to remove entire, for if an egg is left behind, it will

hatch a very minute worm, that will borough in the flesh, and make a bad sore. These eggs are deposited by the chigoe or jigger, which is about the size of a flea, and belongs to the same tribe. After having removed the pestiferous nest, fill the cavity with cigar ashes or fine tobacco, and then stick a piece of court plaster over it, and it will soon be well. There is another insect, and probably of the same species, that deposits an egg that becomes a maggot half an inch long, and is often found on laborers, deep in the flesh, but always leaving an external opening, out of which it will often project its black head, and look at you, especially if spirits of turpentine, which is the best remedy for them, has been ejected into its habitation.

After having finished this examination, and satisfied yourself that the intruders are all disposed of, and resorted to the bed, a musketoe, that you have not been sufficiently careful to keep outside the bar, will appear, evidently indulging the absurd idea that you may be lulled to sleep by his music, and then quietly take his evening meal. These pests are not very numerous, but exceedingly fond of the blood of a white man; and knowing this, you resolve on his extermination, which being effected, you finally fall to sleep, thinking that, after all, man is sometimes exceedingly troubled with very little things.

CHAPTER XII.

The Climate of the Isthmus—Its influence on Health—Predisposing and exciting causes of Disease—The Precautions necessary in oi ding them—Character of the Diseases—Habits of the Natives when Sick.

With regard to the climate of the Isthmus of Panama, and the causes of disease there, every variety of opinion is expressed that can be conceived, even upon this fruitful subject, when once taken up by the public. By some it is claimed to be quite as healthy as any other climate, and especially exempt from the necessarily fatal class of diseases; while others contend that it is the most pestilential in the world, and I have somewhere seen it stated in print, that it is "so deadly that an European can not for any length of time endure it;" and that "animal life of every kind, and especially the human species, were very imperfectly propagated in consequence of its enervating influence."

With regard to the last it is but necessary to state, that a walk through any of the native towns will be alone sufficient to prove the contrary, unless it is the *morale* instead of the physical nature objected to;

and as to the lower creations, they certainly abound in the greatest number and variety.

The latitude of that part of the Isthmus over which the Panama Railroad passes, is between 8 and 9 degrees north, and consequently is subjected twice in the year to the vertical rays of the sun, viz.: about the 21st of April and near the middle of August. The year is divided into two seasons, with little else to distinguish them than that the one is wet, and the other dry, and in this they are strongly marked. The rainy season is their winter, and corresponds with our summer, the rains beginning to fall about the first of May, usually, and terminate in December; and thus, although this is their coolest season, in consequence of the heavy rains and evaporation, yet it is also the period when the sun's rays fall most vertically; and therefore the two great elements in the production of unhealthy exhalations, viz.: heat and moisture, are operating in their extremest degree at the same time. But it should be understood that it is while the surface is undergoing the change from wet to dry, that miasma is eliminated most rapidly.

During the first two or three months of the wet season, it does not rain more than is generally found agreeable for comfort, and to advance the growth of vegetation; and about the 21st of June it clears up, and probably not a drop of rain will fall for a week. This season is called by the natives El Veranito di San Juan. (Little summer of St. John.) Now, during this period, the earth is alternately

saturated and parched, and consequently there is always more or less fever prevailing. But it is at the commencement of the dry season, when the rivers that have been swollen by the heavy rains, fall to their usual level, and the low grounds and marshes that have been inundated, become dry, that we look for what may be termed strictly the sickly season.

Dysenteries and diarrheas prevail more commonly during the wet season, and for very obvious reasons. Notwithstanding the elevation of the sun during the day, the nights are often quite cool. Now, there is nothing more favorable to the development of these diseases than sudden changes of temperature; and here we have them. The laborer at work in the field first swelters under the hot sun, and then is suddenly cooled off by a shower of rain, and most likely sleeps at night exposed to the chilly air, which, under all circumstances, should be most scrupulously avoided.

With such influences as these acting, it would be very unreasonable to expect but that the country would be more or less unhealthy, which is truly the case; yet four-fifths of the cases of disease which occur there are simple intermittent fever, or ague and fever, which the judicious use of fifteen grains of quinine will entirely remove, leaving the patient, after one paroxysm, as well as he was before.

Diarrheas and dysenteries are also usually very light in their character, and easily controlled by the appropriate remedies. Of the more severe forms of epidemical diseases, it was not in my experience to

see but little, nor could I hear from reliable sources of their existence to any great extent, unless it was perhaps at Chagres. With the exception of one season, there has never been any cholera, and then but few cases occurred, and they were confined to Chagres and Gorgona; and yellow fever has never yet been known, at least so I was informed, and I never learned to the contrary. A severe form of remittent or bilious fever prevails to a considerable extent, sometimes, and there are occasional cases of a bad form of congestive fever, but they are usually, if not always, the result of great exposure, or intemperance.

Almost every one who visits the Isthmus to remain there any considerable length of time must expect, as a matter of course, to be more or less affected by the climate, yet not necessarily to have fever. They will be predisposed to it by the miasma, but whether or not they will have it will depend, oftentimes, upon an exciting cause.

By observing proper precautions, a great deal may be done to avoid the miasma, which is the *essential cause* of the fevers. Miasma is eliminated while the surface is drying, after having been saturated by an overflow of the streams or previous rains; consequently, at such times the atmosphere contains more poison than any other. Another fact which has long been observed is, that the evening or night air is most of all pernicious, not so much because it is cool or damp, but from the unhealthy exhalations which hover near the earth like smoke and fog, dur-

ing the night, more than at any other time. The pleasant evenings after clear days, which are always delightful in that climate, are by far the worst, especially if there has been rain within a short time previous. The night air is so balmy and fresh after a hot day, that it is almost impossible to resist the temptation to enjoy it, at least with open windows or in the veranda; yet it is very imprudent to do so. Another precaution of more consequence still, is to close up from the night air the sleeping room, which for reasons already assigned, should never be on the ground floor. While sleeping, the system is very much relaxed, and perhaps drenched in perspiration, and consequently far more impressible than at any other time; and moreover, about 12 o'clock, the temperature of the atmosphere usually becomes much lower than at any other part of the twenty-four hours. Now in order to avoid the miasma on the one hand, and the sudden change of temperature on the other, it is always desirable to sleep in an upper room, and this should invariably be constructed with a ventilator in the roof.

By adopting these few simple precautions, the essential cause of the fevers of this climate may, in a great measure, be avoided. I know it is exceedingly difficult to be always governed by these rules, and at present impracticable, yet they should be observed as far as possible, and ultimately these observances may become incorporated with the established customs of life, and then they will incur neither restraint nor inconvenience.

There is another class of causes far more numerous, and perhaps more important; by which I mean everything calculated to excite fever after the system has become predisposed to it. Foreigners residing in this climate usually become, after a time, a good deal enervated; they find they cannot perform near as much labor, either physical or mental, as in a northern climate. An extreme degree of lassitude overtakes them at times, and they feel it almost impossible to perform any duties whatever. This is the effect of miasma; the system contains the fuel of fever, which only requires to be ignited. Now this is the state in which exciting causes are instrumental in producing the disease, and anything may be deemed such that excites or taxes the system to any considerable extent, as excessive fatigue, exposure to the sun long continued, or a shower of rain while perspiring, over indulgence in eating, and, above all, in the use of stimulating drink. During my services of nearly six months, as one of the Surgeons to the Panama Railroad Company, I never saw a single case of fever from which I apprehended a fatal result, but in persons of intemperate habits; and the only two patients, whose cases terminated fatally, under my charge, had been immediately previous on a debauch.

Of all the exciting causes of fever, I believe this by far the most potent in its results, if not the most common. I am aware that there are exceptions to this—that there are those who bear up under the influence of the use of stimulating drinks—but they

must be considered as exceptions, and their number is very small. The effect of stimulants is to derange the functions of the liver, which is also the effect of the climate; and under the influence of both, there are few constitutions that can long resist diseases. I have no expectation of convincing the public of this fact, for many are too blindly conceited in their own opinions to regard the advice of any one, and such usually work out their experience at a fearful cost. Under the influence of the first debilitating effects of the climate, nothing is more natural than the suggestion to "take a little brandy to prop up the energies of the system;" and there are always enough to give this advice, and participate in the administration; and for a time the effect may seem salutary; but soon the sallow complexion, the irritable temper, and frequent accession of fever, will indicate too plainly the work that is going on.

In a country like this, perhaps more than any other, where there are but few facts established in the popular mind with regard to health, every one voluntarily turns medical adviser; and I believe, as a general thing, the most ignorant are the most forward in their pretences and opinions; and nothing can exceed the ridiculous absurdity often exhibited by such parties upon this grave subject, with no better authority for the support of their views, than that they "believe so," and that is sufficient.

It is exceedingly difficult to convince people that stimulants are not conducive to health in a climate where the tendency is to debility; but such persons

usually undergo a series of revolutions in opinion in the course of a few months, and it is curious to see how faithfully they will adhere to its use in some form. Commencing with brandy indiscriminately, they soon conclude that it must be of the "best quality," and used "moderately," but this is not to be endured long. Whisky, old Monongahela Whisky, will next be tried, and most probably be discovered to be the stimulus for the climate; but this soon wears out, and then gin, and perhaps rum, down to porter, ale and claret will all follow in their turn, each receiving its medium of praise as being just the thing for the particular constitution; yet one and all of them are alike pernicious, with the exception, perhaps, of claret, moderately used, which may do no harm if it is good; but the others, in proportion as they contain the stimulating principle, are injurious, however carefully taken, to nineteen-twentieths of those who reside upon the Isthmus, by promoting the diseases of the climate, laying all other considerations aside. Nor is it the use of alcoholic drinks on the Isthmus alone that is found injurious; but those who, previous to going there, have been intemperate—whose constitutions have become in the slightest degree impaired—are almost sure to break down at once. I have seen this effect in so many instances, that I have no hesitation in setting it down as an almost invariable rule, and therefore would advise any such unfortunate individual to keep off of the Isthmus if he values his life as of the least possible consequence.

Every one has probably heard of the "Chagres fever," which is usually spoken of with an emphasis that strikes terror to the timid, especially if they have ever been exposed to the atmosphere of that place.

Although the name is not, by any means, a classic one, yet it has the advantage of being correct, in a general sense; for I do not believe that there is another place in the world, where the causes of diseases are developed and fostered to a greater extent than they are in this place of most unenviable notoriety. The consequence is, that a bad and fatal form of fever prevails there at times, which is most emphatically the fever of Chagres; and the unmeasured use of intoxicating drinks is one of its principal causes.

Exposure to the rains of that country is another very common exciting cause of fever, and it should be very carefully avoided. This has been one of the great causes of fever and dysentery among the laborers on the Panama Railroad. Often they would scarcely get to their work, when a sudden shower would fall upon them, and when perspiring profusely over the spade or pick. If they abandoned work for the day, but few would have the prudence to change their clothes for dry ones; and perhaps resume the same wet garments the following morning. Now, nothing can be more prejudicial to health anywhere, than such habits as these, and when we add to this, the perhaps worse practice of sleeping with the windows and doors of their quar-

ters open, which they would always insist upon doing, it is more a matter of wonder than otherwise that they endure the climate as well as they do. The Railroad Company make the most liberal provisions for their comfort, but it was always impossible to make them understand that there were any reasons for closing a house, other than to keep out the cold. The native, on the approach of a shower, strips off his shirt, which is probably the only garment he wears; securing it in a dry place, he lets the rain fall upon his bare back, and then resumes his covering after it is over.

This is truly a primitive mode of protection from rain, yet from what I have seen, I judge it to be the best. The perspiration may be checked for the time and the system receive a shock from so plentiful a shower bath; but the function of the skin is immediately restored by the dry covering, and on the whole, upon hydropathic principles, I am not sure but the subject has received a tonic after nature's purest method, and without interfering with his time or business. But when a native gets the fever, he repudiates this practice altogether, so much so, that it is exceedingly difficult oftentimes to get them to take any remedy combined with water; and they most scrupulously avoid the application of water externally, even in quantity sufficient to keep themselves clean. The natives' remedy for fever is limes, the juice of which they suck from them while the fever is on, with slices of the same placed upon the forehead and temples, and with this simple treatment,

and abstinence from water and food, they readily recover. Bathing in the streams is a very common practice among them during the dry season, but they seldom indulge in this luxury after ten o'clock, and rarely at all during the rainy season.

A very wide-spread impression prevails in the public mind in favor of a Southern climate for those who are predisposed to, or affected with consumptive diseases; and as a general thing, such is the case; but the Isthmus is an exception to the general rule; for, whether or not it is the approximation of the two oceans, and almost constant sea breezes, or the extreme dampness of the climate; either or both of these causes; in no place have I seen consumption more rapidly developed; indeed, it is the disease of which the natives very commonly die. The same is true of almost every other taint in the system—as, for instance, chronic syphilis is almost sure to be developed, if there are any seeds of it lurking in the constitution.

A very important consideration for those who visit this climate, is that of dress. The experience of the English and American Army and Navy surgeons in tropical climates, is well sustained here with regard to the use of flannels. There is nothing which so well protects the cutaneous surface against the effects of sun and rain, as this material; it prevents the rapid evaporation from the surface, and consequent sudden check of the perspiration; and a shower of rain or the night air may be borne with far greater safety if the skin is protected by this co-

vering; and light gauze flannel next to the skin will usually be found to add much to the comfort; but to those who are frquently exposed, a good substantial red or blue one is much preferable.

Another preventive which I deem of great importance, and which has hitherto been entirely neglected, is the use of fires. During the rainy season the atmosphere is very damp, and pervades everything; even the closest drawers will not exclude it, and clothes will become mouldy without frequent sunning, or the liberal use of camphor gum sprinkled among them. Such an atmosphere, especially in a sleeping room, must, of course, be more or less detrimental to health; but its effects may be entirely overcome by the occasional use of a fire in the afternoon, when the air is frequently so cool as to render it very grateful to the senses. Heat is, moreover, one of the most powerful disinfectant agents we have, but how far it would prove effectual in dissipating the miasma is not certainly known, although there is no doubt but that it would to a considerable extent.

The observance of the precautions which I have but imperfectly here laid down, for the guide of those who go out to this country, I am very confident would do much for the exemption of disease; and I know no positive reason why the Isthmus of Panama may not, in the future, undergo as great a change in this respect, by the population of the country and cultivation of the soil, as have many portions of our Western and Southern States.

CHAPTER XIII.

Inter-communication between the Atlantic and Pacific—Advantages to Commerce—To the Growth and Prospecity of the Pacific States—New lines of Steamships—Their effect in meliorating the Condition of Mankind.

THE subject which more than all others has called the attention of the public mind to the consideration of the Isthmus of Panama, is that of inter-communication at this point between the Atlantic and Pacific Oceans. Since the acquisition of California, the necessity for some better means of transit has become much greater than ever, and may be deemed absolutely essential to the commercial interest of the whole world. But this is not a necessity of the present time merely, suddenly springing up, and liable to be superseded hereafter; but on the other hand, so open to the eyes of the world have been the advantages to be derived from connecting the two oceans by a railroad or ship canal, that, as early as 1827, General Bolivar caused the country to be surveyed, in order to ascertain the most practical route; and since then, the English and French governments have done the same, and the subject has been elaborately discussed by Baron Von Humboldt, Louis Napoleon Bonaparte, and many others, of less distinction, but perhaps of equal judgment; but it has

remained for American enterprise to put in progress of execution this great work, which will add another to the many monuments of her indubitable energy and enterprise.

A recent writer in speaking of the advantages to England's commerce in this route, over all others, says: "Even now the western route over the Isthmus, spite of the harrassing and tedious passage across it, is much the nearer way to the British possessions in the South Pacific—the New Zealand, the Great Britain of the southern hemisphere, and the Austral continent." "There are three routes which it is known can be accomplished by steam in the following average times: The eastern route, or that by Suez and Singapore—

Outward Voyage, . .	80 days.
Homeward do. . . .	71 "
	151

The western route, by Panama and New Zealand, allowing twenty-three days from Southampton to Panama:

Outward Voyage, . .	64 days.
Homeward do . . .	68 "
	127

Round the Cape of Good Hope:

Outward Voyage, . .	72 days.
Homeward do . . .	72 "
Total, . . .	144 days."

So that the western route to Austral Asia, as *at present existing*, is shorter by thirty-four days than the eastern route, and by seventeen days than that by the Cape. Now when we add to this the difference in time occupied in crossing the Isthmus by the best means hitherto, and by railroad, which cannot be less than four or five days from the Atlantic to the Pacific, we find it will give this route a precedence of at least twenty-one days; a very important item in the commerce of Great Britain with the countries in the Pacific and Indian Oceans, to which her exports amount to about thirty millions of pounds sterling; and an advantage which she will not fail to avail herself of when the door is fairly open.

But it is to the advantages likely to accrue to our own commerce, in uniting more intimately the Atlantic and Pacific states, that we look for the greatest results that will follow the completion of this long contemplated enterprise.

Within the last three years there have probably 150,000 persons crossed the Isthmus of Panama, at an average expense of not less than $30 each, which is at least $20 more than it will cost by the railroad, which will be a saving in the future for that number of the travelling public, of $3,000,000, independent of the more important items still, of time, and indescribable sufferings, which so many are familiar with, who have hitherto crossed the Isthmus by boats and mules.

But these are but few of the many items of importance to be considered in this relation. Whence come the supplies, the provisions, clothing imple-

ments of every kind, and even the houses, or materials for building them, which were necessary for the already large population of California? It is well known that they were, for the most part, shipped from the different American ports along the Atlantic Ocean; that those cities and villages have been transported hence by long and perilous voyages around Cape Horn. Attempt for a moment to estimate the cost, in time and money, thus incurred, and it will be found that the mind is incapable of grasping the stupendous fact.

Another important feature, which will be incalculable in its advantages to the growing interests of California—arising from the easy and agreeable means of transit across the Isthmus—will be, that of the flocking thitherward of the families of those who are already there as pioneers, paving the way to fortune, and of such as shall go in the future; thus revolutionizing the social habits of that country, and establishing a more permanent and happy state of society. Hitherto this has been one of the greatest detriments to emigration there, and the separation from the happy influences of home has been one of the worst in its effects on the habits and characters of that people. In carrying out the already contemplated plan of establishing a line of steamships from Panama to Australia and China, a new impetus will be given to that trade, which may be extended to any extent, and do much towards enlightening the inhabitants of the "Celestial Empire" in regard to the real progress of the rest of

the world, from which they have so scrupulously, and so much against their own interest, shut themselves out of the past.

The Pacific whale fisheries form another branch of commerce, which will come in for a share of the benefits to be derived from this great work, in enabling the ships in this trade to discharge their cargoes and receive their stores so near the fields in which they cruise, and thus make quicker and more profitable returns to their owners. The rapidly extending steam navigation of the Pacific will soon create a demand for coal, which it will be almost impossible to supply by the present means around Cape Horn. This has, so far, been one of the greatest obstacles and expenses attending the establishment of steamship lines upon the coast; but with the arrangements already making for the transit of this material across the Isthmus by the Panama Railroad, this difficulty will be, in a great measure, remedied, and the expense lightened. Look as we may, upon every hand, and it is almost impossible to conceive of any great public interest that will not be enhanced by the completion of this long contemplated desideratum in the commercial communication of the world. Nor is it alone what is understood as "public interest," that is to be advanced, though indeed this is nothing more than the aggregation of private benefits; but how many thousands, altogether disconnected from any great public enterprise, are already looking forward to the time when their individual advantage may be subserved

in some way by the completion of this important undertaking.

The ultimate effect of this line of railroad on the Province of New Grenada can scarcely yet be conceived. In opening the doors, however, to her commerce—that greatest of all channels through which flows the wealth, prosperity and progress of every country—it cannot help stimulating the dormant energies and awakening a new life in that people, and urging them in some degree to reclaim themselves from the comparatively low position they hold in relation to almost every enlightened nation, in all that pertains to agriculture, arts, or manufactures. The social condition of New Grenada must rapidly undergo a radical change; for, except in a few of their principal towns, such as Bogota, Carthagena and Panama, it is in a most degraded state, and it is not possible for any people to resist long the power of the simplest arts of civilized life, when they are cultivated under the life-giving influences of an active and remunerating trade.

A country like this, with almost unbounded natural resources—known to possess great mineral wealth—with a soil so rich, and under a climate so fertilizing and genial, that the greatest possible variety of natural products are found upon its surface springing up without the planting or care of the husbandman—with but one season, and that season an almost unvarying and eternal summer—with all these advantages, I ask how is it possible that it can be travelled over by from fifty to a hundred thou-

sand Americans every year, and not at once be seized upon and made the garden of the world?

One of the greatest results attending the introduction of steam communication between different countries, though a result not immediately contemplated in their establishment, is that of breaking down the barriers which exist between different nations, familiarizing them with each other's habits and customs, and diffusing intelligence and a knowledge of the mechanical and agricultural arts and sciences. Within a few years the world has undergone a very great change in this respect, and in the future we may justly anticipate the time—that good time—when the different nations of the earth shall have become so intermingled with each other that we shall know no people as foreigners—no national habits and customs that are strictly peculiar—and religious intolerance and superstition shall no longer rear their barriers to true progress, and the great element of religious truth shall be planted everywhere; and thus he who establishes a line of steamships between two distant countries, will be found practically the most successful missionary.

CHAPTER XIV.

Proposed Route for a Ship Canal—Isthmus of Tehuantepec—Nicaragua—Panama—Relative advantages of Nicaragua and Panama—Navigation of the River Chagres and River San Juan—Opinions of Travellers—Reason why they are often so diverse—Advantages of the Harbor of Navy Bay.

THREE routes, within the boundaries of the great Isthmus, have each had their advocates, claiming superior advantages over the other two—the Isthmus of Tehuantepec in Mexico, Nicaragua, and Panama—but I believe the last has invariably received the preference from disinterested parties who have correctly informed themselves of all the facts in relation to the three.

The Spaniards explored the Isthmus more thoroughly, without doubt, than it has ever been done since, and they made this part the thoroughfare to their Pacific possessions, and it has remained the principal crossing to the present time. Garella, who surveyed the country by the appointment of the government of France, chose the Isthmus of Panama as the most feasible route for a ship canal or Railroad, and Col. Lloyd, who acted for the English government, arrived at the same conclusion.

The most advantageous course for great public thoroughfares is usually pointed out by the unerring hand of Nature; the Indian first adopts it, and afterward it becomes a mule path, and with the progress of civilization a carriage road is opened, and then a railroad or canal, and perhaps both. Such has been the history of almost every great highway in the American States, and such is most truly the case across the Isthmus of Panama. There is a necessary order to be observed in the accomplishment of all great measures for public improvement, and the steps of progress must be regulated by the necessities of the people, and an intermediate measure which may be deemed absolutely essential to the favorable accomplishment of the great work of constructing a ship canal across the Isthmus, is that of a railroad, leaving the still more formidable undertaking for future consideration.

Hitherto all measures for the purpose of connecting the two oceans have been deterred, from apprehension of difficulties, both of a moral and political character; but since the treaty has been established between the United States and the government of England, pledging the neutrality of the Isthmus, and a better understanding of the climate and its effects on health, these may be considered in a great measure removed, while the physical obstacles stand alone with their bold fronts to be contended with. In this respect it is not probable that the stupendous character of the enterprise has ever been overrated, while by many it has without doubt been estimated too low.

The distance across the Isthmus of Panama, according to the report of Mr. Garella, is only about forty miles, in the course surveyed for a ship canal commencing at the head of Navy Bay, and the highest summit necessary to attain is four hundred and fifty-nine feet; and since the explorations were commenced to ascertain the most feasible route for a railroad, under the direction of the Panama Railroad Company, I have been informed that Mr. Baldwin demonstrated a still more advantageous course, with an elevation of but two hundred and seventy-five feet. The great difficulty to be overcome is that of supplying a sufficient quantity of water to feed the canal on the summit level, and this is undoubtedly a most serious one.

When the railroad shall have been completed, and the Isthmus in some measure populated, with its agricultural resources developed, so that not only laborers, but their supplies may be furnished there, then will be the time to not only talk, but to act, in this important matter. Then let every nation of the earth that is so disposed, contribute its proportion, not for the prospect of a direct revenue, but for the purpose of improving commerce, and who can say but that we shall have, not only a ship canal, but an uninterrupted water level communication from ocean to ocean. Such an undertaking I am not aware of having ever as yet been anticipated, but to decide that it is impracticable, is to deny the possibility of new inventions for the purpose of removing and excavating earth and rock. Such a

canal, and such only, I apprehend, will be found suited for its purpose, and repay the governments that shall construct it.

The route across, or rather through Nicaragua and its lakes, has received considerable attention and been reported upon favorably for the construction of a ship canal.

The whole length of this route, as stated by Mr. Baily, who surveyed it some years since for the Government of Central America, is two hundred and sixty-four miles; ninety of which are on the river San Juan, ninety on Lake Nicaragua, twelve on the River Tipitapa, between Lake Nicaragua and Menagua, or Lake Leon, which last is thirty-five miles more, and the remaining twenty-nine miles to be a land-cut between Menagua and the port of Realejo.

Mr. Baily calculates Lake Nicaragua to be one hundred and twenty-eight feet above low water on the Pacific Ocean, and Lake Menagua twenty-nine feet higher than Lake Nicaragua, and above this an elevation must be attained of fifty-five feet, between Lake Menagua and Realejo, making a summit level of two hundred and twelve feet above the Pacific Ocean at low water.

What the advantages of this route are, I have never yet been able to ascertain. The distance to California would be shortened, but it is doubtful whether anything would be saved in time, over that by the way of the Isthmus of Panama, in consequence of the greater length of the canal, while it would be increased to the still more important countries in the

South Pacific Ocean, and yet not avoid that greatest of all difficulties, the want of an adequate supply of water to feed the canal at the summit. But the greatest objection of all is the distance. We are every day being taught, practically, that the shortest routes are in thelong run the cheapest, although at first more expensive in their execution, even on rail-roads where the speed is so great as to lessen the reality of distance; yet how much greater still will be the loss in a ship canal, where the progress of ships through must necessarily be very slow.

The task of lifting a steamship or merchantman over this country, at an elevation of two hundred and twelve feet, and a distance through, of two hundred and sixty-four miles, would be found a very formidable one, at least; but I have no doubt all these considerations were fully appreciated by Mr. Baily.

Another route, or rather a deviation from this, is receiving some attention at the present time. It takes in its course the River San Juan to Lake Nicaragua, and from thence across to its south-west coast, a distance of sixty miles, and then over the high ridge to the port of San Juan del Sur, on the Pacific Ocean, a distance of seventeen miles, making in all one hundred and sixty-seven miles. The highest elevation to be attained between Lake Nicaragua and San Juan del Sur, according to Mr. Baily, is five hundred and eight feet, and consequently the difficulty of obtaining water to feed a canal is greater than that of the other. Another author, Galisteo,

who surveyed this route in 1781, makes the summit level but one hundred and fifty-five feet above Lake Nicaragua; but I am not aware that his report has ever been confirmed.

The advocates of both these routes base their estimates in a great measure upon the feasibility of converting the San Juan river into a ship canal. By some the practicability of this does not seem to be doubted, but the trial will prove, if nothing else will, that this is a very formidable stream to contend with. We have no rivers in the United States that compare with those of Central America in their deviations from a given level, either in extent or rapidity of their variations. It is no uncommon thing for a stream of from two to three hundred yards in width, to rise a foot an hour, for twelve or fifteen hours in succession, and then decline as rapidly; and during the flood they bear down their swift currents immense quantities of flood-wood, and sometimes the largest trees of the forest.

After the completion of the canal between Carthagena and the Magdalena river, in New Grenada, the first flood swept away its lock, and yet this is an ordinary canal, and merely communicates with the river at its extremity. So confident were the statements of those who might be presumed to know, of the navigability of the River Chagres, that the Panama Railroad Company first intended to commence the construction of that work between Gorgona and Panama; but they soon found it almost impossible to reach Gorgona with their supplies. It is very

true, that small steamers, of light draught, go up as far as Gorgona, but it is only for a part of the season, and they can never be relied upon; and the same obstacles are to be contended with on the River San Juan.

The last route described above is now being improved for the transit of passengers to and from California, with a line of steamships upon the Atlantic and Pacific, connecting with it. Mr. Vanderbilt is the pioneer in this work, and I have seen it stated that a large sum has already been invested in steamboats for the San Juan river and Lake Nicaragua, and other means necessary to facilitate the transit of passengers; but of the success of the enterprise we have yet to learn. The public has already been entertained by numerous and diverse statements concerning the character of this route, comparing it with that across the Isthmus of Panama. Some have described it as much the best, while the accounts of others preclude the possibility of anything like comfort, representing the whole journey as a series of miseries. The most glowing fancy has been indulged in describing the "magnificent" scenery of the river, lake, and mountain pass.

A recent author of a newspaper article has even stated that he thinks this route would be preferable, were the Panama railroad completed; but it may reasonably be supposed, that such writers have never had their enthusiasm dampened by exposure to the rainy season, and that they have not fully considered that on the very ground from which

they viewed the magnificent scenes, they might soon after sink to their middle in mud; nor, that the "gently-flowing river" would, perhaps, within twelve hours, become a powerful current, bearing huge trees swiftly down upon its surface, against which it would be almost impossible to make any progress.

It is very easy to reconcile these conflicting statements with an honest purpose, by supposing the parties to have traveled over the line either during a rainy or a dry season, and to have ascended or descended the river, according to the nature of their account. To descend the San Juan during the dry season, or ascend its current when swollen, and while the rains are still falling, is to experience two conditions as widely different as are the various newspaper accounts by travellers.

A very serious objection to this route is that of its harbors. That of San Juan del Sur, on the Pacific, is objectionable in almost every respect, while those of the Panama route are remarkably good. Navy Bay is four and a half miles deep, and the island of Manzanilla is situated directly at its mouth, and upon its east side, affording shelter to shipping, and room, with sufficient depth of water, for the largest class steamships to lie directly alongside its piers. As a commercial port for the lading of ships, and discharging cargoes and passengers, it is, undoubtedly, the best on the coast of Central America; and these are considerations of the greatest importance in connection with a railroad or ship canal.

CHAPTER XV.

Former Views concerning a Railroad across the Isthmus—Reasons for a change of Opinion—Organization of the Panama Railroad Company—First Steps taken for the Prosecution of the Work—Its Magnitude—Manzanilla Island—The Harbor—Prospective Town—Prospects of Business—Changes already Effected—The Future—Sketches of the Isthmus.

It has formerly been contended that a railroad would never answer the necessities of commerce, but merely contribute to the more ready and comfortable transit of passengers. While the last consideration may be deemed of sufficient importance to warrant the undertaking, we regard it as of by far the least consequence of the two.

Within three years, a very remarkable change has taken place, having a direct bearing upon this question. The Pacific, which hitherto had seldom been traversed, except by an occasional whale-ship, or merchantman, has now become the great highway for numerous steamships, while the number of sailing vessels have accumulated more rapidly than was ever known before in any part of the world, and, therefore, it becomes a question whether or not the

more rapid transit by railroad, over that of a ship canal, will not repay the cost of discharging and re-lading cargoes, inasmuch as the means are already on the Pacific for re-shipment to any destined port. With this view of the subject, the Panama railroad was undertaken, and having been frequently alluded to in these pages, it becomes necessary, in order to embrace all points of interest to the public, to speak more definitely of it.

The Company was organized on the second day of July, 1849, by the election of a board of directors, and is represented by John L. Stephens, William H. Aspinwall, and Henry Chauncey. John L. Stephens was elected president of the board, and Francis Spies was appointed secretary. Mr. Stephens has been, emphatically, the pioneer in this enterprise, and the duties of his office could not have been placed in better hands, not only from his thorough knowledge of the country, and the habits of the people he had to deal with officially, as the representative of the Company, in obtaining a grant for the road; but for his accurate judgment, liberal policy, and untiring devotion to the interests of the work.

The company thus formed proceeded at once to direct full and careful explorations and surveys of the country, in order to decide upon the best route for the construction of the road. About one year and a half was consumed in these investigations, which finally resulted in the selection of the route from Manzanilla Island in Navy Bay to Panama on the Pacific, as laid down on the map accompanying

this volume. Since then the work has been going on under the immediate charge of George M. Totten, Esq., as chief engineer, and with an energy of purpose which characterizes the operations of business men, who know what they are doing, and are confident in the result.

To convey a general idea of the magnitude and character of this enterprise, it is but necessary to state that, up to the present time, (Dec. 1st., 1851,) the Company has sent out fifty-eight vessels freighted with stores, materials, &c., exclusive of those engaged to take the iron from England direct, and that 2019 men have been employed on the work, under engagements varying from three to twelve months each, besides about 1000 natives, mostly from Carthagena and its vicinity.*

The first thing to be done was to clear a portion of the island of its encumbered vegetation, and erect dwellings for the officers and men. It was here that the first blow was struck in the commencement of this great work, and from this spot the sound of the axe went forth in the forests to tell the natives that Los Americanos had come to hew out a path for the iron horse, that they might reach with greater speed their possessions still farther distant on the Pacific; fecilitate their commercial intercourse with the inhabitants of the celestial empire; and bring the far-off colonies of Australia nearer to their father-land.

* For further details of the road, and of its progress from time to time, see appendix.

The island of Manzanilla is about one and a half miles in length, and a mile in width. The channel upon the east side, between the island and the main land, is narrow, but of sufficient depth for navigation, and is a perfectly safe harbor for shipping. The main entrance to the bay, upon the west side of the island, is about two and a half miles in width; and it may be entered at any time by vessels of the largest class, and without even a pilot.

The prospective town, although it is already laid out, as yet has received no distinctive appellation; but, we trust, it will receive one that shall perpetuate the name of some member of the Company that was first in breaking ground in this great work, among whom there is none more prominent than that of Aspinwall.

Navy Bay extends up about four and a half miles, and affords secure anchorage in every part of it, and many coves where vessels can ride in perfect safety, under cover of points, protected from winds or sea. A deep cove in the island, immediately on entering the bay, affords abundant space for a large number of the largest class vessels, with sufficient depth of water behind and alongside the pier. Upon the other side of this harbor, the railroad track is laid on piles driven along the water's edge, by the side of which piers are extended for the discharge and shipment of cargoes.

The island was originally entirely a coral formation, but the soil which has been superadded by the process of vegetation and decay, is now of sufficient

depth to sustain the heaviest growth of forest trees, which were thickly scattered over it, but have been cleared away for some distance back, the largest of which is the Manzanilla tree, from which the island received its name.

The coast of the main land opposite the island, in every direction, is generally high and abrupt, yet clothed with the most luxuriant vegetation to the water's edge, and every where the cocoanut palm is seen conspicuous, which supplies an abundance of that delicious fruit.

In the selection of Navy Bay as the northern terminus of the railroad, there can no longer be any doubt but that the best point is obtained. The harbor has less objections than almost any other; it is at all times accessible, without sand-bar or other obstruction. The tide rises and falls, usually, about 24 inches, and the convenience to the travelling public of being able to land directly from a vessel upon a pier, will be appreciated by those who have heretofore crossed the Isthmus, and been obliged to pay two dollars each, for being carried to and from a vessel at Chagres.

Considering the natural advantages of this point, and the large amount of business that must necessarily be transacted here, the conclusion is unavoidable, that it must rapidly become an important commercial town, where enterprise will as surely be rewarded, as any event under human control can be predicted and made certain.

Such have been the changes effected in this place,

which, but a short time since, was the haunt of wild beasts and reptiles, which were seldom ever startled from their hiding-places by the approach of man; and the future traveller who visits the Isthmus, has yet to mark far greater and more perfect improvements, than any we have here depicted.

Already the long piers and shipping in the harbor, the warehouses and dwellings, with the puffing locomotives arriving and departing with passengers and merchandise, presents an animated and business-like aspect.

In order to embrace many details of matters and things on the Isthmus and other places, which will be found of more or less interest, especially to those who visit this country, the following chapters will be devoted to a series of communications which were addressed to my friend, D. D. Wait, Esq., of Batavia, Genesee County, New York, and originally published by him. In perusing them, I beg the reader will remember that they were impressions of the time, often hastily conceived, and sketched under circumstances unfavorable to great exactness, or elegance of diction.

CHAPTER XVI.

Leaving New York—Arrival at Havana—Appearance of the Harbor—The City—The Moro Castle—Passports—A night in the Harbor—Architecture of the City—Volantes—The Bishop's Garden, &c.

On the 26th of April, 1851, I shook hands with my friends and went on board the Steam Ship Ohio, Lieut. J. Finley Schenck, Commander, about casting off from her moorings and bound for Havana, en route for the Isthmus of Panama. As we dropped down the bay, I looked back upon the Babylon of modern times and thought of the many thousands who crowded its thoroughfares, and felt that I was but a drop in the bucket just gathered up from the great sea of life.

On looking round upon my "companions de voyage," every one seemed intently occupied with the thoughts which usually crowd upon the mind on such occasions. Many of them were evidently bound for the auriferous regions in the far off Pacific, and in many an eye, which had no doubt brightened with the prospect of gathering up the glittering dust, there glittered now a tear, and I thought it

time for them to begin to note down the sad items which were to make up the price of GOLD.

On the morning of the sixth day, after a delightful voyage, we made the highlands of Cuba, and in a few hours afterwards, we turned in beneath the towering Moro and anchored in the harbor of Havana. The arrival in port is always a source of great delight, especially to those not accustomed to the sea, and it is usually improved in replenishing the stomach of its lost contents; but Havana presents too many objects of interest to be neglected, and particularly so to those who have never visited a Spanish Town. The city, with its quaint edifices, is situated on low ground, at the right hand as the harbor is entered, and on the left are the high walls of the Moro Castle, extending back a great distance, and so elevated that the sentinels, as they pace to and fro on its ramparts, look like pigmies. The American who is accustomed to make the most of everything, looks with astonishment at the unimproved borders of this beautiful harbor, which embrace more than half of its circumference, and immediately begins to calculate the various purposes for which they could be occupied.

There being no appropriate piers or docks, steamships, consequently, lie out in the bay, and passengers pass to and from the ship in little boats, many of which are rigged with sails and an awning over the after-part, to keep off the rays of the sun, which are intensely hot here.

We had scarcely come to anchor, when a Span-

ish official appeared, and with a decidedly military air, took his place in the captain's room, from which it was announced, that "all those passengers who wish to go ashore, must first walk up to the office and procure their passports." The price was one dollar, in Spanish silver, and although we did not deem it by any means a hospitable invitation to view the city or patronize its hotels and shops, yet we concluded to avail ourselves of the distinguished privilege, and after having read the fearful account of what would be done with those who should be found on her majesty's dominions without this protection, we put the document aside, to learn afterwards that it was seldom ever called for from orderly people, who confine themselves to their own affairs.

Before we could effect a transit to the steamship Falcon, on which we were to proceed on our way to Chagres, the afternoon had merged into the twilight of evening, and as we sat out upon the open deck that night, with pleasant companions, many tales of other days, and wild adventures on distant lands and seas, were recounted, so that it was not until the flickering lights of the city began to disappear, and the watchword from the ramparts of the Moro, warned us of the night far spent, that we could be induced to leave the delightful starlight scene, and the balmy air that fanned us so gently, for our close quarters below.

At an early hour on the following morning, our

party started out for an outside view of Havana and its environs.

It may be doubtful whether there are any who have not heard enough of Havana; of its gaily-colored and splendid palaces, of its public and private gardens, and the many beautiful drives or *pasios*, and other peculiarities of this oldest of the Columbian cities.

Havana and its suburbs contains, at the present time, about 180,000 inhabitants. It is built principally of brick, in the most substantial manner, the walls being very thick, and heavily stuccoed, and, lastly, colored in the most fanciful manner, usually either red, blue, or yellow, and sometimes the various colors combined, although the whitewash is the most common, many buildings being simply trimmed with colors. I can conceive of no language, other than the vernacular, capable of conveying any just idea of the style of architecture. The principal hotels and private residences are entered by a *pasio*, or court pass, which leads to a centre court; the lower story is occupied for carriage-room, stable, and servants' apartments; and from this centre court, or from the *pasio*, a broad flight of steps leads to the apartments above, or rather to a broad paved walk, open one side, looking into the court, and from this, through wide doorways, into the various rooms of the household, varying, of course, with the different uses and extent of the edifice.

The shops usually have one broad entrance, with

doors that fold upon themselves, and no windows. They are small, and so arranged that the stock can mostly be seen, at a glance, through the doorway in passing. When windows do occur in the first story of shops, or in public or private buildings, they are often left without glazing, but strongly barred with iron, and close with shutters inside. In the second story, or dwelling part of the building, the windows are barred with wood, and secured at night and from storms by close shutters only. This description applies more particularly to the older class of buildings, although many very elegant private residences, especially in the suburbs, were in the same style, although comparatively of modern appearance; the windows would be secured by a richly ornamented iron grating, and protected from the sun by broad curtains, suspended from the top, so as not to obstruct the full ingress or egress of a current of air.

The style of buildings is exceedingly well adapted to the climate; with their high walls, open courts and balconies, and free ventilation, they are calculated to promote, in the highest degree, the comfort of the inhabitants, but, of course unsuited to any climate than that of constant summer.

The streets are mostly very narrow, with walks not more than sufficiently wide for two to walk abreast, and often not sufficient for that. Shops are scattered in every part of the town, without much distinction; a block, for instance, bearing the same general appearance, will be occupied by parties engaged in the most diversified pursuits, and thus it is

that a great similarity exists in the different parts of the town, although some districts are far more elegant than others.

The great repugnance of the Havanoes to the adoption of the customs and improvements of other nations, is exhibited in their adherence to the rude style of their vehicles. The most peculiar of all is the *volante*, which is, no doubt, the exact contrivance, without improvement or modification, that a mule was first attached to, but with us has been shortened, and reduced to the modern gig. The appearance of this vehicle is very ludicrous, with its large wheels and long shafts, which hang suspended by the side straps of a saddle upon one of the small native horses, and mounted by the driver, while the "top," or covered seat, is placed at a considerable distance forward of the wheels, and thus the poor animal is compelled to the double task of hauling as well as bearing his burden. Not liking to exhibit a preference for the natives' taste and notions of elegance in this particular, we stepped into a New York made omnibus, drawn by a pair of horses, evidently not of the islands' growth, and rode out three miles through the suburbs of the city, to near the bishop's palace and garden.

This garden contains about 60 acres, and it is hardly possible to conceive of a greater variety, or more luxuriant vegetation, than is here presented to the eye at every step for miles in the course of its many varying walks and drives. The royal palm is the principal and most beautiful of the many

shade trees that line its walks. The trunk, which is somewhat pear-shaped near the ground, runs up sometimes 125 feet perfectly straight, with a gradual taper before reaching the root of the leaf, which encircles the trunk for four or six feet further, and is of a bright green, and then spreads off with great regularity, giving the peculiar umbrella like appearance to the top of the tree. The fruit of this palm is of no account, but adds much to the appearance of the tree, as it hangs in large clusters like grapes, at the root of the leaf, and from four to six feet below the point where it spreads from the trunk. Nothing can exceed the beauty of this tree, with its smooth, straight trunk to the cluster of fruit which encircles it like a collar, and above it of a bright green for a few more feet, and then the spreading top of beautiful symmetry, which crowns the whole.

Of the great variety of trees in this garden, I had not time to examine many, nor should I have known what they were, in some instances. I could only designate the orange, lemon, date, mango, lime, and a few others. The caoutchouc I also discovered, from the gum which I found issuing from a fracture. Streams of water cross the garden in many directions, through artificial channels, feeding small ponds, which in some places were covered with beautiful lilies, and pools which were covered with iron-grated buildings for aquatic animals, although but one was inhabited, and that by a lonesome-looking alligator. In appropriate enclosures I observed a panther, two leopards, a wolf and the American

Eagle, which seemed confined to rather narrow limits, and altogether away from home. Many ancient looking pieces of statuary were situated along the walks, and some of very perfect execution.

For hours we walked through the shady avenues of this beautiful place, and although far exceeding anything I had ever before seen, yet there were on every hand evidences that it is now much short of its former perfection and grandeur. In many places the ruins of old buildings, the use of which I could not divine, and fountains which had become simply frog pools, told plainly of neglect, and that nothing save the fertility of the soil and favorable climate preserved it from going to waste. The present Bishop takes little or no interest in it, although it is nominally under his charge.

Of the Cathedral supposed to contain the remains of the discoverer of the New World—the Tacon Theatre, and other notable places, the public are already familiar. The Pasio de Tacon is the favorite resort of the citizens, and I am informed that another public garden, far superior to the one I have described, is situated but a short distance from the city.

CHAPTER XVII.

An unpleasant Dilemma, for which there is no remedy—The highlands of the Isthmus—Chagres—Fort San Lorenzo—Disembarkation—The Boatmen—Pitiable plight of the Ladies—Going up the River—Going to Navy Bay—First Morning on the Island—The Coral Insect—Crabs—Temperature of the Climate.

On returning to the ship at night, with the expectation of leaving early the next morning, I found myself and room-mate in one of those unpleasant dilemmas which sometimes occur, and for which there is no remedy, simply because the other party is—"a lady."

In our absence, two women had come aboard, and demanded a room; the clerk, on looking over his list, found every one already occupied; but being a gallant man could not tell them so, inasmuch as their passage had been paid from New York through, and consequently took them into the cabin and told them to take their choice, which unluckily fell upon the one we had pre-occupied. Finding no one to remonstrate, they expressed their satisfaction with it on condition that the trunks should be removed; which was readily assented to, and in this state we found

our anticipated pleasant accommodations for the remainder of the voyage.

On applying to the clerk, he gave us a discourse upon the difficulties in supplying a greater number of passengers with rooms, than there were berths in the ship. To have insisted on the ladies being ejected, notwithstanding we had the prior claim, would have been incompatible with our ideas of civility, and to sleep without a berth, would certainly be very uncomfortable, and therefore, in this state of things, we were glad to accept a lease on a room, for one night only, the claimants being ashore; and as we "turned in," I confess to the apprehension of being soon "turned out;" but thanks to the bacchanalian propensities of its subsequent occupants, they did not appear until the following morning.

Early the next day we got to sea, and as I moved about from place to place on the ship, I felt truly like one houseless and homeless; but towards night I was finally shown a berth, the lower one of three, in a room of the least possible dimensions, where I was permitted to crawl in, and then in straightening out, shove my head behind two trunks and sleep if I could. The door opened upon the gangway, and was of necessity left open during the night to give us air to breathe, and as occasionally spray came in with it, I felt truly that my lot was a hard one, but it was only to be borne. During the whole passage, I earnestly hoped for some sign or word in acknowledgment of my courtesy, from the ladies, to mitigate my sufferings; but not one word did

I hear, and as I frequently observed their sharp set features, I own to have formed a very unfavorable opinion of them.

On the morning of the fifth day, we made the high mountains of the Isthmus near Porto Bello, and in approaching the coast, Navy Bay next appeared, and soon after we were at anchor off Chagres, with the moss-covered and time-blackened walls of the old Fort San Lorenzo directly before us.

To disembark was now the immediate business, in which every one was striving to be first; and at Chagres it is a performance far more interesting to witness than experience. Imagine four or five hundred passengers, each with carpet-bag and portmanteau in hand, hurrying down the narrow steps by the side of the ship, among a fleet of small boats, the noisy owners of which, some black, some red, and others white, are alike expert in the use of invectievs, which they shower unsparingly on every one, and to such a degree, that if the least of their imprecations were answered, the ship and all its contents would immediately sink, and the reader will have some slight idea of the scene.

The cloud belt which hangs over this country about half of the year, had already formed, and the rain was falling plentifully as I silently looked on, and with a degree of indifference, until the ladies, of whom there was a goodly number on board besides those already alluded to, came to depart, when I could not refrain from a feeling of sorrow at the pitiable plight they exhibited. There was one

who, innocently enough, had been somewhat free in her remarks about "the vulgar men on board," and who evidently had no better idea of crossing the Isthmus than that a trip up the river Chagres would be a merry excursion, and that riding a mule would be romantic. On the following morning, when I saw her packed into a small open boat, with some of the "vulgar men," with the rain falling most unmercifully, she looked crest-fallen, and if it would have done any good, I most certainly should have pitied her.

It was not until the next day that we left the ship for Navy Bay. Our party consisted of twelve or fourteen, and we were obliged first to disembark in a yawl and row out to the Railroad Company's steamer, that was waiting to receive us. Scarcely had we shoved off from the ship, when rain commenced falling, which, with the heavy sea, rendered our condition anything but agreeable. As we neared the little steamer, we were alternately above and below its deck, pitching up and down to such a degree that it required a very accurate calculation of the exact time to leap anywhere but into the sea. One by one, however, we all succeeded, and at dark were landed on the pier at Manzanilla Island.

The sun had scarcely begun to shed its golden rays upon the eastern sky, ere I was up on the following morning, and, having taken a cup of coffee, started out to view the island.

That an insect, too minute to be seen without a microscope, should have been employed to build up,

from the bottom of the sea, a foundation upon which man was ultimateiy to erect his habitation, is a fact here fully demonstrated, and one that impresses the mind with a deep sense of the inscrutable operations of Infinite Wisdom. When this stupendous work was commenced or finished, if it is yet complete, by this great family of mites, we, of course, have no means of knowing; but the large growth of trees upon its surface, and the broad levee or embankment thrown up, of broken coral, upon the north shore, indicates great age; and the occasional discovery of a cannon ball would seem to suggest that active operations had at some day been carried on here; but no further traces are to be discovered, although it is known to have been the favorite rendezvous of the buccaneers, about two hundred years ago.

With everything so strangely new about me, the sun appearing so out of place, and vegetable life presenting such unusual forms, while the very air I breathed seemed unlike any I had ever before inhaled, with the strange consciousness that the surface on which I stood could not have been a part of the original formation of the earth, I should have been half inclined to consider whether, in reality, I had not landed upon the shores of another existence, were it not that the unmistakable evidences of mortality were about me.

The morning was most truly delightful, and, as I walked along the beach, the gently stirring air was fresh and pleasant, while the sea had scarcely a ripple upon its surface; the sky was clear, and the birds

sang sweetly. Great numbers of land-crabs started for their hiding-places as I approached, and it was curious to see with what facility they would scramble along, one way as well as another, enjoying the happy faculty of getting through the world without being obliged to turn around. They excavate deep holes in the ground, or seek out crevices in the coral rocks, where they usually remain during the day.

The temperature of this climate is remarkable for its regularity, seldom varying over fifteen degrees from one year to another, and 89 has been the highest degree indicated on the meteorological tables kept by Dr. J. A. Totten, surgeon of the station at Navy Bay, during the year 1851.

CHAPTER XVIII.

Leaving Navy Bay, Chagres, Fort San Lorenzo—Arrival at Gatun Station—Resume our Journey in a Small Boat—A Night at Dos Herminos—An Early Start—The River by Moonlight—Appearance of Morning—Breakfasting at Ahorca Lagata—The River Scenery—Arrival at Bujio Saldado.

After a few days spent on the Island of Manzanilla, the head quarters of the Panama Railroad Company in Navy Bay, I left for the station assigned me at Bujio Saldado, up the Chagres River, a distance of thirty miles. I had already become impatient to see the interior of the country, and it was with no small gratification that I went on board the little iron steamer Gorgona, which was to take us around the point, a distance of ten miles, to Chagres, and from thence up the river to Gatun, a distance of nine more. Stopping an hour or two at Chagres, I took a stroll along this smallest, and altogether most miserable place in the world, that is made the regular port of so many lines of steamships. Notwithstanding the deplorable aspect of everything about Chagres, and the fact that gambling and rum-selling are two conspicuous and often outside occupations, yet it is not by any means destitute of respectable inhabitants. In the short time

of my stay, I met with several New Yorkers—men who, though accustomed to the refinements of life, were here habited in coarse pants and red flannel shirts, with cowhide boots upon their feet, the legs of which were drawn over their pants—away from home, from friends, or luxury, or comforts, and, worse than all, too often with the unmistakable marks of miasma and fever. The only thing of interest about Chagres is the old Spanish fortification. It is situated upon a high, rocky point, and upon the left hand as the mouth of the river is entered. Upon passing the fort, the native town of Chagres is situated close under its walls, and consists of nothing more than a collection of reed-huts thatched with palm leaves. For two dimes I was taken across the river to the native town, and passing through it commenced the assent of the hill by a paved road which leads to a level plat of ground in the rear of the fortification. This road must have been built at the time the fort was erected, yet it is in a good state of preservation, and makes a pleasant although steep and circuitous walk. Crossing the deep moat which separates the front from the rear fort, upon the remnant of an old draw-bridge, and then passing down a wide flight of steps, the main plaza is reached between the battlements which look off in three directions, and are at least one hundred and fifty feet high from the sea which breaks upon its foundations on the one side, and the river on the other. Some thirty or forty old Spanish guns are lying about, with their carriages crumbled to dust beneath them, some

being brass pieces of great calibre and beautiful workmanship. The pavement of this plaza was laid with cement, and has the apparent durability of one immense solid stone, although it has faced the storms of over two hundred years. Cannon balls and shells lay scattered about, or piled up in pyramids, and the magazine contains boxes of powder so decomposed that it is no longer ignitable.

From this part of the fort a subterranean passage, handsomely arched, and ten or twelve feet wide, leads to underground apartments, deep back in the hill; but answers to inquiries concerning them were as unsatisfactory as the echoes which came back as distinctly as they were uttered. I went in as far as the light would reveal the way, against the advice of a resident, who told me that a fever would be the consequence of gratifying my curiosity; but without even discovering a reptile, which are said to congregate in these places in great numbers. From one apartment, the roof of which had long since rotted away, a tree, eight or ten inches in diameter, was growing thriftily, with its green top reaching far above the walls.

Notwithstanding the general impression that masonry cannot be made enduring in this climate, the walls of this old work, to the cap stone and watch towers, are seemingly as perfect now, in the main, as they could have been a hundred and eighty-one years ago, when Morgan, at the head of the Buccaneers, took it from the Spanish.

The banks of the river, from Chagres to Gatun,

are, for the most part of the way, low; and, as we moved slowly along between them on the steamer, the dark green foliage of the trees, and the many wild flowers and fruits every where appearing, presented the vegetation of this land of unchanging verdure, in its most pleasing aspect.

As we approached the railroad station at Gatun, with its storehouse, hospital, and habitations for two or three hundred men, the effect was strikingly singular in this country of almost unbroken forests and sparcely scattered native huts.

As the Gorgona was not going on further, a small boat was engaged, with two natives for oarsmen, and in company with the commissary and superintendent, we started out on our way. We had made but eight miles ere the evening grew dark upon us, and we hauled up to the shore at Dos Herminos, where a rude sign, indicating entertainment for the traveller, hung suspended from a pole in the bank. The inclosure, which signifies a hotel here, was partly of rough boards, and partly of canvas, with a canvas covering, and in form an L. One extremity was fitted up for a sleeping apartment, with canvas stretched across rough poles, one above the other, three deep; the other, the dining room, with a long table through the centre capable of seating a hundred persons, and short side-tables. At one of these we drank our tea and ate a biscuit with a good relish, notwithstanding the table reminded us of the scuttle-deck of a vessel, and our seat was a narrow strip of rough board, supported by stakes driven into the

ground, which constituted the only floor of the whole concern.

Discerning, at a little distance, a small habitation which offered, apparently, a better chance of comfort, I rapped at the door, and was bade come in by the owner of the establishment, who was reclining on a bed of formidable dimensions, compared with those he supplied for the public. As might reasonably be expected, I found that he was sick, and that he had been so for some months. He cursed the country, yet clung to it for the sake of making money, and when told that a more liberal expenditure of his gains, which are large, for his private protection and comfort, as well as for the public, in the erection of suitable buildings to keep out the rains at least, would, no doubt, save him from sickness, he turned philosopher and answered that he deserved all that he suffered, and it was a consolation to him. Such was his apology for self-inflicted misery, and such examples are by no means uncommon in this country. A miserable economy is practiced in all that pertains to personal comfort, and for the protection of health, while, on the other hand, a most wasteful extravagance is often indulged in for the gratification of some idle whim, or to keep up a character of apparent liberality.

For night quarters, we were permitted to make a choice of the standees; but to find one the rain would not reach, in case of a shower, was somewhat difficult. The ground was not only damp, but, in many parts of the inclosure, decidedly wet, and every

thing was musty, and covered with mould. We had one hammock, which, from courtesy, was assigned to me, and wrapping my cloak about me I turned in and swung myself to sleep.

At two o'clock in the morning the commissary, who claimed to always sleep with one eye open, discovered starlight through an opening in the roof, and calling our attention to it, proposed an early start, to which we most readily acceded, and, as I turned out, a chill ran through my frame, at which I was not surprised after such a night, nor could I wonder at the feverish habits of the people, who live in such habitations as this.

To get our boatmen started was a work requiring some patience, but finally, through the perseverance of the commissary, it was effected, and we were once more under way. The night was beautiful, and every sound was hushed save the dipping of the oars, as we moved along on the bosom of the stream over which the trees and mountain-tops cast their shadows by the light of the declining moon, now lost to view, and then again appearing as we followed the ever varying course of the river, or passed from behind the summit of a hill. Each one seemed spell-bound, and scarce a word was uttered for hours to break the solitude, which, like a pall spread over the world, seemed to indicate that we were the only survivors of the long night of death.

At last the grey light of the morning appeared in the eastern sky, and with it all nature became reanimated; the forest songsters awoke and resumed

their melodious strains; the moon had gone down, the flickering stars had put out their lights, the mountain-tops lit up with the first rays of the sun, and the dark foliage of the forest appeared in its bright hue of green, for the glorious morning was fully broke upon us.

At eight o'clock we arrived at Ahorca Lagata, a distance of eighteen miles from Gatun by the river, although but nine on the line of the Railroad. This station was under the superintendence of Mr. Miller, with whom we breakfasted, and afterwards he took us out upon his work, to show what he had done, and what he was going to do, all of which was very creditable to his perseverance and the industry of his men.

We had a distance of eight miles yet to traverse on the river, and we hastened away, leaving our hospitable host looking after us from the beach where he had welcomed us so heartily but an hour before. The day continued pleasant, and the high banks of the river presented an ever varying panorama of gorgeous vegetation, adorned with wild flowers of the richest hues, while here and there a large tree, rearing its head above all surrounding objects, would appear attired in the gay tints of the lilac. While in the full enjoyment of the scene so varying and beautiful, one of the boatmen cried out, "*la Bujio*," and sure enough the beautiful station of Bujio Saldado was in full view.

CHAPTER XIX.

Bujio Saldado—The Station Buildings—The Ravine—A Torrent—A Professional Call—Sharp Practice among the Natives—An Alcalde's House and what it Contained—His Wife, and how she made Soup.

Bujio, or Buyo Soldado, signifies in the vernacular, a soldier's cottage, and received this name, according to tradition, from the fact that a soldier had been secreted and cared for here, by a native, in consequence of some service he had rendered one of their Padras or Priests, during the war of the buccaneers. Previous to passing into the hands of the Panama Railroad Company, the place had been occupied by a few native huts, and as a rosa for corn, plantains, bananas, &c. I have spoken of it as the beautiful station, and as such, it will be considered by the future traveller, who views it under anything like favorable circumstances, although it is, no doubt, destined to undergo, hereafter, a very material change.

The station buildings occupy a position on the bend of the river Chagres, commanding a view of about half a mile above and below, which is about as extensive a prospect as can any where be found

on this exceedingly tortuous stream. The building erected for the officers of the Company, is on a level plat of ground, elevated about thirty feet from the low water-mark of the river, and looks directly down upon it from a neat veranda.

Near by, a deep rivine comes in, down which, during the rainy season, a mountain torrent rushes with great velocity. Many a time have I followed the almost dry bed of this rivulet far back into the mountains, the steep sides of which it would be almost impossible to climb, and afterwards, perhaps the next day, a stream, ten or twelve feet deep, would rush furiously down, gathering flood-wood from the fallen trees of the last dry season, building up obstructions, and then break away, undermining huge trees, and bearing them, root and branch, into the river below. At one time, after about three hour's hard rain, my attention was attracted by a sound as of a water-fall, and on looking out, I found this stream so swollen, and pouring down with such impetuosity, that its current extended directly across the Chagres, a distance of at least one hundred yards, and washed to a considerable extent into the opposite bank, notwithstanding the bed of the ravine was nearly level, for thirty or forty rods back towards the mountains. When the stream subsided, it was found that large trees which had fallen across, from bank to bank, had been swept away, although they were elevated ten feet from the usual water level. I am particular in relating this, as these torrents present a serious obstacle to contend with, in the prose-

cution of public works in this country, and interfere so materially with the navigation of its streams.

I had scarcely become settled in my new abode, when one day Gavino, our Spanish boy, whose duty it was to attend to the comforts of the officers, informed me that two *hombras* were waiting to see Señor Medico. I directed him to invite them in, and learned that they wished me to go and prescribe for a sick man about five miles down the river, at the house of an alcalde named San Antonio. At first I declined their invitation altogether, but as they still persisted, I finally told them that I should charge ten dollars, with the view of putting a stop to their importunities; but, to my surprise, they readily assented, saying that I should be promptly paid if I would go. After this almost unparalleled exhibition of confidence in my skill, I believe I should have been inclined to go without any other terms whatever. The messengers soon started homeward to announce my expected arrival, while I ordered two oarsmen, and with a companion, proceeded down the river. Landing about a mile above the ranch, we walked that distance along a level and hard-beaten path, through a grove of palmetto palms. On arriving at San Antonio's, his wife, a fine looking woman, with black eyes, erect figure, and more than usual white skin, received us very politely. Her house was one of the best I had seen in the country, the walls being plastered on the outside with mud, and internally divided into two apartments, with split reeds. On looking about, as I seated myself on a rude bench, my atten-

tion was attracted by the occupation of a woman engaged in the process of cooking. The fire was built between three stones, which supported an iron kettle, into which she was depositing jerked beef cut into small fragments, rice, yams, and bananas, which, being stewed together, makes a favorite soup for these people; while the smoke of the fire found egress through numerous apertures which are always left as a matter of necessity, or for that purpose, in these tenements. An earthen vessel, sufficiently large to contain ten gallons, was in one corner, filled with water, which not only becomes clear by the deposit of its sediment in this way, but, from evaporation on the surface as it gradually percolates, it is rendered considerably cooler. The apartment was fully occupied with barrels, boxes, and such like trumpery, containing various articles in common use, while over-head were hanging, in rich profusion, plantains, bananas, corn braided in strings by the husks, jerked beef, hams, &c., for San Antonio is a rich man, and provides entertainment for travellers.

Having thus taken a cursory glance at the contents of the domicil, and finding that the natives were fast accumulating, I inquired for the patient, to which query I was answered, not a little to my surprise, that the sick man lived a great distance back from the river. On receiving this intelligence, I concluded it would be best to immediately return, and consequently started, upon which our benevolent host offered to treat, and at the same time said that there was a sick man, or rather two of them, in

a rear hut, and she would like to have me prescribe for them, to which I readily assented, and at once proceeded to see the patients, mistrusting instantly the game, and deciding to practice accordingly. Having ascertained that one of the invalids was in the last stages of consumption, and that the other was afflicted with inflammation of the lungs, I returned to the presence of the handsome Señora, who immediately inquired for the nature of the diseases, and their remedies, to which I as promptly replied, that my opinion and remedies would cost her ten dollars. At this answer she affected great astonishment, and refused to comply with my terms; consequently I left, and had proceeded about ten rods without even looking back, when I heard the call of Señor Medico! and turning around, I discovered the messengers who had first applied to me, and who to this moment had kept out of sight, and of whom, I am sorry to say, the fair mistress had denied any knowledge. Finding that I was resolute in my determination not to prescribe without the stipulated fee, they finally counted out seven dollars and sixty cents in franc pieces, and imploringly begged that I would trust them for the balance necessary to make ten dollars their currency, which was acceded to; I proceeded to prepare the necessary remedies, and directing their administration, once more started homeward, at the same time requesting them to send to me on the next day, and I would furnish still further means for the patients' relief. After dividing the money with my comrades, and purchasing

bananas, I returned, heartily pleased with my successful practice, in the collection of the fee, to wait the result on the patients. On the third day afterwards I received word that the one afflicted with consumption had died, as I had predicted; and that the other was fast getting well, so that no further medicines would be required, and therefore the value in money would be equally acceptable. For declining to accede to this proposition I plead the usages of my country, but it was not satisfactory; and I was afterwards informed that it was their sanguine intention to shoot me the first time I passed that way.

CHAPTER XX.

Why a Swiss loves his Native Country—When Days come Slow, and go Wearily—River Travel—How we took in Strangers, and were taken in Ourselves—Our Neighbors—How to preserve Beef—A new Patient—Señor Sipreon's House, and what he Eat, and how he Cooked it—My Patient's case grows Desperate—He prepares to Die, but does not do it—Natives' notions of Railroads.

A Swiss, on being asked why he was so attached to his native country, answered, that there were rocks and mountains upon which he fixed his affections. That the physical aspect of a country may have much influence over the stability of its inhabitants, we have not much reason to doubt, but while the Swiss would attach himself to an Alpine crag, and never wish to be removed, I believe such is not often the effect with foreigners, neither is it the case on the Isthmus of Panama.

When once the mountains and the valleys, the beasts and the birds, with the palm and the plantain, have become familiar things, and above all, when social intercourse is restricted to a narrow and uncongenial circle, and the mind has little occupation except in wandering fancies, then will the days come slowly, any go wearily away. Months have already

passed since I came into this summer land of sunshine and showers, and, like the climate, my duties have been one almost unvarying round from day to day, and I am beginning to appreciate, as I never did before, the blessed privilege enjoyed by those who live in a land of changing seasons, civilized society, and completed railroads. The fleet of boats which pass every two weeks, conveying passengers to and from Panama and Chagres, on the arrival of the steamers at these ports, is a spectacle of the greatest interest of any that comes under our observation; and it is truly wonderful sometimes to see the number of people going to or coming from the land of gold.

On one of these occasions, about nine o'clock in the evening, after a rainy day, an application was made on behalf of "four ladies," for the privilege of a shelter for the night; the party having been out in the rain all day, the night being dark, and the river rapidly rising, they had found it impossible to proceed any further. Of course a simple feeling of hospitality dictated a cordial welcome, and every one who could claim a cot, immediately resigned it to the service of the guests; but this was not all, the possibility of seeing four ladies on the Isthmus, had not been even dreamed of, and the fact that they were reported genuine, was a feature of great interest, especially those who had not feasted their eyes on such a sight for six months. Gavino having been directed to put the kettle on for a cup of hot tea, and the steward ordered to take four of the best

cots, with the best mosquitoe bars, and arrange them in the largest room up stairs, we sat down to wait the arrival of our visitors. It was a period of great interest, and to render the prospect as fair as possible, some one had taken the responsibility of increasing the expense of the occasion, in the way of an extra number of lights. Presently we heard their footsteps, and then in they came, but O, Jupiter! what a set; instead of four "ladies," they were but four women and four babies ! ! Their wet garments hung about them in a manner perfectly shocking to behold, or even contemplate, and they looked forlorn and wretched, although they may not have felt so. They were evidently natives of the green isle, and the eldest, a very sensible woman, about forty-five, and the mother of the four children, was on her way to join her husband in California, with no other protector than a boy about fifteen years of age. We made them comfortable, and for the time, apparently happy, for which they were very thankful, and we were very glad in having been able to do so.

A little distance from the station were situated two native huts, one occupied by a man and his wife, with almost any number of children, and the other by a solitary old man named *Sipreon*, who was esteemed wealthy, owning lands very indefinitely defined, on which he cultivated a rosa, or plantation, back from the river, and kept a great number of cattle. My first interview with the old man was on being called to see a friend who had come to visit him, and fallen sick with inflammation of the lungs.

He had been out that day to catch a beef, and had it already strung up in quarters, inside his house, and was busy cutting it in strings to dry, as New England people do pumpkins. It is after being cured in this way, that it is sold by the yard in some places, and it is the only way by which it can be preserved in this country, for if packed in the ordinary manner, it will spoil in spite of salt or brine. The strips are cut from the muscle, or lean parts, free from fat, and then rolled in fine salt, and hung immediately in the sun to dry.

Señor Sipreon's house was better than is usually found, having the thatch, on one side, extending nearly to the ground, making an extra room; and it was in this that I found my patient, on a shelf made of split reeds.

As I called from day to day, I sometimes found the old man preparing his homely meal, solitary and alone. It consisted of jerked beef, rice, yams, &c., stewed together, and sometimes, as an extra, a roasted plantain. He was at least sixty years old, and often told me that he had not had the fever for the last forty. My patient's case grew desperate, and I finally told the neighbor's wife, who was a relative, and nursed him, that I was fearful he would not recover: therefore, on my next visit, I found him dressed in white pants, hose, and a clean linen shirt; but notwithstanding this unfavorable omen, I had the satisfaction to see him afterwards perfectly restored.

These people seemed, in some measure, interested

in the railroad, and when platform cars were put on the track for moving stone and timber, they evidently, for some time, considered it the ultimatum of the great wonder, and would often get their friends together from a distance, and shove them over the road as far as the track was laid; but one day I witnessed a scene of astonishment to be equalled only on communicating to them the fact, that rain falls in the United States, for a part of the year, in light flakes, and covers the earth white; and that the rivers become solid, so that men and horses can travel over them. A party was assembled, when a companion who had been at Navy Bay and seen a locomotive and the passenger cars, commenced a description, which if as expressive in language as it was in gestures, as he described the motions of the engine, and depicted the sounds of escaping steam, and its velocity, it certainly must have conveyed a very accurate impression of its character; that it did, I have reason to believe, from the fact that the platform cars were henceforth abandoned, and treated as things of the least possible consequence.

CHAPTER XXI.

Leaving Bujio Soldado—A Day on the Chagres River—Arrival at Navy Bay—Visiting the Minde Swamp—Native Cooking—Gathering Cocoanuts, &c., &c.

After three months' confinement to professional duties at Bujio Soldado, I packed up to be ready for the first opportunity to come down the river to Navy Bay. A recent attack of fever had exhausted, in a good degree, my small stock of vitality, and I therefore resolved to take the steamer, and thus avoid the liability of being subjected to a night on the river, in an open boat, with the chances of a drenching rain. There are but three steamers on the Rio Chagres, that go up as high as Gorgona, and it was seldom that they ever stopped at the railroad stations. After having waited patiently for six days, the glad sound of the whistle of the steamer Mille, announced her approach, on her way down, she having passed up two days previous. I was soon on board, with a dozen laborers from the station, who had served out their time, and for the first time, perhaps, for weeks, were made to look cheerful, from the thoughts of home, each having been furnished with a certificate, which entitled him to a free

passage to the States. It was truly pleasing to watch the sudden change from the care-worn, woe-begone countenance that I had observed from day to day, to one of comparative cheerfulness, and as we started off, one poor fellow, who had been sick and sadly frightened, gave utterance to his feelings in addressing me, "Well, Doctor, I no go on the hill now." "On the hill" was the burying-ground.

We had hardly got under way, and in the full enjoyment of the prospect of a pleasant trip down the river, when I was called to prescribe for the Captain, who I had observed to take frequent draughts of water, which were invariably deposited over the guards into the stream again, from which it had been dipped. I found him burning with fever, yet under the necessity of performing the double duty of commander and pilot; nor was this the worst of it: the engineer was left behind sick, the fireman had just "given out," and the crew consisted of but two men besides, and one of these was a raw Spaniard, who had never been upon a steamboat before, and unable to understand a word of English, and, consequently, when told to "come here," would be likely to go there, or to "haul in," would let go. This was an interesting state of things, truly, on board of a high-pressure steamer, which suggested the idea that the chances were about equal for a passage to Eternity, as to any place on this sphere, even Chagres.

Happening to know a man on board who had steered a flat-boat down the Mississippi, I suggested that he should take the Captain's place at the helm,

which was done, and the latter spread his coat upon the deck and laid down, while I administered the remedies. I next went in search of the fireman, whom I soon found, and put under treatment also. Our boat was going on swimmingly, and soon my patients were in the same condition, for the perspiration started out in large drops, and they were then relieved. Eight miles below, at Ahorca Legata, the steamer was to stop and take on some more men, that being a railroad station also, and by this time, the Captain was again able to take the helm. About the same number were taken on board here, and with low water in the boiler, the word was hurriedly given to cast off; but the substitute for an engineer was unable to start the engine forward, the current caught the bow, and in a moment we were swept close in shore, beneath an overhanging tree, which struck the smoke-pipe, and it came tumbling down among us; but being expert at the dodge, all hands escaped. To let off the steam and put out the fires, was now the only alternative. This being done, with the help of the passengers, the pipe was again raised, the boiler filled, and the fire re-kindled. We were flattering ourselves with the prospect of being soon again under way, when, lo! the packing flew out, and away escaped the steam as fast as generated. To cool off was again indispensably necessary, in order to re-pack the boiler-head, and this measure involved a consumption of fuel which rendered it necessary to "wood up" before leaving. To do this the Captain and one hand went ashore in the only small

boat of the steamer to search for wood, which he was fortunate in finding, and in order to hasten matters, he accepted the services of a volunteer on shore to row out to us with the small boat loaded, while, with his assistant, he furnished another load from the pile, a distance from the shore. The volunteer proved not to be expert in the use of oars, and soon capsized, the boat going down the stream, while he, with a good deal of effort in the use of his arms and legs, finally got on shore. We were now in a pretty predicament, the Captain and one hand on shore, without any means of returning to the steamer, with but two hands to man the vessel, and not sufficient fuel to raise steam. The only expedient was hit upon, viz., to cut away and burn the stanchions and flag-staff; this being done, we finally reached the shore, "wooded up," and started once more on our way. I am happy to say we reached Chagres that night, without any further serious adventures, and the next day, on board the Gorgona, I arrived at Navy Bay.

On arriving here, I found it necessary that I should visit some native laborers at the Minde Swamp, a distance of about five miles, four and a half by water, up the bay, and half a mile by land. Taking coffee at 6 o'clock in the morning, and in company with Mr. King, the superintendent, with good oarsmen, we started out on our daily trip. The morning ride was delightful; and on reaching the station, we generally found breakfast prepared, which consisted of fried plantains, coffee, and some

kind of salt meat, boiled yams, and sometimes potatoes and hard bread. Our cook was a native; his fire was by the side of a green stump near by, and his utensils consisted of a frying pan and a tin coffee-pot. To do justice to such a breakfast, it was absolutely necessary to have a good appetite, and a ride of four and a half miles would usually furnish this essential. Our house consisted of a board shanty, built roof shape, and divided into two apartments, the larger one being occupied by the natives, and principally for the women, children, and sick, who were severely afflicted with *calentura*, or fever, and the other for ourselves and the station stores, such as barrels of beef, pork, yams, hard bread, &c., &c. After prescribing for the sick, I usually amused myself in looking up birds of beautiful plumage, and blossoms of gorgeous hues, for an hour or two, and then return. One day on our return, we went into a little cove and sent the men after cocoanuts, which we could see in great quantities along the beach. They soon brought their arms full, and opening one we drank our fill of the delicious milk, under the protest of one of them, who said that it would give us *calentura*. We did not experience any thing of the fever predicted, but before we reached home a squall struck us, which made me horribly sea sick, and effectually spoiled the relish of the cocoanut for that night.

CHAPTER XXII.

Leaving Navy Bay—The Rolling Sea and Tropic Summer without Change—The Steamer that could not go up the River, and consequently went down—A Day on the Chagres in a Canoe going up—Shooting Game on the River—A queer Bird—an attack of Fever.

The period of my sojourn at Navy Bay having expired, I left for Ahorca, Lagata, the station alluded to in the last chapter.

So accustomed are we to view everything around us in a condition of change, that it is almost impossible to conceive, and more difficult to realize, anything really permanent. Sitting, as I often did at Navy Bay, to watch the waves as they rolled in upon the shore, I would sometimes forget that the sea is "restless," and wonder when it would stop.

To those who have been accustomed to the changing seasons of the land of *our homes*, it is more than all else difficult to conceive of an eternal summer—no autumn, no winter, no spring, but ceaseless, endless summer—with no change to mark the progress of time but a season of drenching rains, alternating with one of scorching sunshine with the forest and the field ever clothed in its rich verdure of green.

As I count the months which have already passed since I have been a dweller in this land, I sometimes unconsciously wonder why they do not come—the cool breezes of Autumn—but it is of no use, for they will never come. We are in the dominions of old Sol, who holds a fiery sceptre, and looks down upon us daily with a burning rage, which makes poor mortals covet a place beneath a screen from his fierce eye. So has it been since Adam was placed in Paradise, and it may yet have been but the beginning of this long summer, for who knows when it will end?

In my last letter I gave you a sketch of a day on the Chagres, "going down," and now I must complete the account of my trip by another day, coming up. On leaving Navy Bay, we came around the point on the coast, and entered the mouth of the river at Chagres, in the R. R. Co.'s steamer Gorgona, to the station at Gatun. At 3 o'clock, P. M., I embarked on board the steamer Swan, bound up the river to Bujio Saldado, where I was first stationed. This little craft is the smallest on the river propelled by steam, and I found her manned by three boys. I was a solitary passenger, and being provided with a blanket, was prepared to make a night of it. But in this I was disappointed. We had gone but a mile, when the tiller chain broke, and the command to "stop her," was cried out by the Captain, at the wheel, to prevent running into the bank, or on a snag. Not having an anchor aboard, we were of course at the mercy of the current, which, like the

tide, as Byron has it, "leads, God knows where"; but, in this case, most likely to the bottom of the river. To connect the ends of the chain was but a short job, but it was of no use, for the rudder would not mind the wheel after it was done; and thus we floated down a mile and a half, in constant peril of striking a rock, a snag, or having the smoke-pipe or upper works swept off by overhanging trees, and in such an event most likely being blown up. In this critical state of affairs, I discovered, very much to my satisfaction, a small boat, which I hailed, and for *dos pasos*, which I readily counted out, I was taken back to the station at Gatun. In the evening, I had the satisfaction of hearing the little steamer puffing up to the landing, where she tied up for the night.

I next embarked in a *canoe*, manned by two natives, an old man and his son. As I stepped into it with my valise, the considerate native placed a piece of board, about four feet long and eight or ten inches wide, in the bottom, and offering me his extra flannel shirt, folded for a pillow, motioned for me to lie down, which, however, I graciously declined, preferring to use my overcoat for that purpose, when necessary, which proved to be the case before the day was ended. We were well armed, the older *hombre* having a very suspicious looking musket, while the *hombrecite* was furnished with his *machetè*, (a heavy, sword-like knife,) and I had a small fowling-piece, which had been presented to me at the Bay by a sailor, to whom I had rendered a professional service. Thus armed and equipped, we started

up stream on a journey of eighteen miles, which took these *hombres* seven long hours to accomplish, with their paddles, against the strong current. I could not help thinking how some of my Batavia friends would have enjoyed my place that day, for scarcely a moment passed but some bird of beautiful plumage would fly past, or apparently wait upon the branch of a tree to be shot, or a large fat *iguana*, (an animal of the lizard species, which are frequently found four or five feet long,) would show himself in the grass, or upon the boughs of the trees overhanging the stream; or perhaps a lazy alligator, sunning himself upon the beach, and I know not how many other kinds of game a sharp eye would have detected; but I presume many, from the fact that although I kept a look-out a part of the time, yet the natives often signified to me by signs that game was within shot, which I could not see; and in one instance, they hauled into the shore, and the *hombrecite* grasped the musket and rushed into the thick bushes out of sight, and while I was wondering "what game was up," the loud report of his piece indicated that a death must have occurred at one end or the other of it at least. My curiosity was soon relieved by his return, dragging along a *guarro*, or wild hog, which the natives consider a great delicacy. Wild turkeys were very numerous, as well as parrots and paroquets, but my back gave very sensible signs of approaching fever, and I was too intent upon arriving at my destination to give it rest, to improve, with any great degree of zest, the opportunity,

although I took off the heads of a couple of large iguano, and clipped on the wing a peculiar, long-necked, soldier-like bird, which falling into the water, we took in. On examination I found one wing injured, which I dressed as best I could, for which kindness he seemed to like my company, and stood up with his head erect, peering at me the rest of the way; but when we landed, he very deliberately walked off, as much as to say, "I don't care longer to continue your acquaintance."

As I anticipated, I had hardly arrived at my quarters, ere a burning fever set in, and I reeled to my cot, to remain in something more than tolerable temperature for the night; but thanks to the sovereign remedy, quinine, I had no return of it the next day.

CHAPTER XXIII.

Ahorca Lagata—A Thunder Storm—Another Visit to Chagres—Appearance of Manzanilla, going out the Harbor—Capt. Chapman and his Adventures—A Wreck of Humanity—A trip down the Bay after Shells—A speck at Sea, and what it turned out to be—Departure Homeward.

AHORCA LAGATA signifies, according to the natives' version, "to hang a cat;" but when, or under what circumstances such a sentence was executed on a member of the feline race, tradition says not.

The station is situated on a narrow point between the Chagres river and a deep ravine, and is the first place where that stream comes to view after leaving Gatun by the railroad. It is as wild a place as need be at any time, but especially so during the rainy season, when the showers are frequent, and the vivid glare of the lightning dazzles the eye, and the loud peals of thunder break upon the ear with a deafening crash, and the rain comes down as though the clouds had felt the shock and deposited their contents in one mighty torrent.

The work having become nearly completed and the laborers transferred to other stations, or returned to the States, it became no longer necessary for me to

remain, consequently I improved the first opportunity to come down the river to Navy Bay and remain until the time should come on which I was to embark on my homeward voyage. When the time was once set on which I was to leave the Isthmus, how wearily, oh! how wearily did those days pass on which I waited the arrival of the steamer that was to bear me away to the old familiar scenes of other days, that a tropic sun had brightened on my memory—so far, far away in the North. It seemed as though swift-winged time had stayed her progress, and was determined not to go on, without the slightest regard for my wishes.

After a few of the days so anxiously to be disposed of were passed, I availed myself of an opportunity by the Gorgona to once more visit Chagres. The morning was clear and beautiful, and as we moved out from the harbor, the sun, which had just risen from his golden-fringed hammock in the east, shed down such a flood of light upon the little settlement of Navy Bay, that, with its white houses and scattered cocoanut trees, it looked more than ever like a fairy scene just opening to the view, contrasting widely with the opposite shore, skirted by the almost impenetrable forest, the dark emerald green foliage of which gently fluttered in the morning air, revealing the dew-drops as they glittered in the sunbeams.

Being fairly under way, Capt. Chapman, who had the temporary charge of the Gorgona, seated himself on the hurricane deck, at his usual look-out, and commenced turning over to me the pages of his large

volume of unpublished adventures, which had occurred during the many years he had spent upon the seas, in which time he had made more than twenty voyages from the port of New York to the coast of South America. The topic had turned to the recent burning of the steam propeller La Fayette, at Chagres, which he had endeavored to tow into shoal water while her hull was but one great chaldron, from which streamed forth the livid flame, casting its lurid glare upon all surrounding objects; but in this he was unsuccessful, and she went down with all that was valuable in her beyond the hopes of wreckers. This led to the wrecking by him of a vessel up the coast, a few years since, on which he found, as part of the cargo, a large number of cases of tropical birds, beautifully prepared, and shipped for England by a gentleman at Bogotá. The ornithological specimens, although beautiful, he did not deem convertible into cash, nor good to eat, so he consigned them to the deep, in his search for more valuable salvage; in which, however, he was not very successful, and therefore left the vessel to go to pieces on the reef, not much richer than when he found her, to learn afterwards, that the birds he had thrown overboard were worth the moderate sum of thirty thousand dollars.

On arriving at Chagres, as I was passing through one of the public houses, I observed on a settee a miserable wreck of humanity, whom I discovered, as he accosted me, to be one of the hands that was on the Swan at the time of going up the river, and who

commenced singing and dancing "Jump Jim Crow" when we were in our worst plight. On inquiring the cause of his present condition, I learned that he had been capsized and nearly crushed to death in attempting to save the Swan, which some rascal had cut loose from her moorings at Chagres, to float out to sea, and was perhaps more totally wrecked than himself. One of our party having called for me, I hastily administered my most consoling "hopes" that his "hull" would bear repairs, and started for the door, which I had hardly reached when he hailed me again: "Doctor, you remember the Captain of the Mille, you came down the river with?" "Yes." "Well, *he* is dead." He uttered this in such a tone of despair, and at the same time dropping his head, that I could not help pitying him, notwithstanding the hardihood he had exhibited on the former occasion. I turned away and thought of what the Captain of the Mille had said when I saw him last—and now that he was dead!

I have been down the Bay since then, and as I was strolling along the beach, picking up shells, which are found here in great variety, I sat down to rest, and looking out upon the water I saw a nautilus, and as I watched it, tossing upon the rippling sea, I thought how strangely it was like man, tossing about upon the sea of life; and watching still, as it came near, to my surprise a heavy ripple threw it on the shore, from which I thought it must be dead; but it was not, yet its rippled race was run, and as I examined it, the thought was forced upon me, if I,

too, should stand upon the shore of time, would there not a being as unlike, and superior, stand upon that shore to receive me? With these thoughts I turned away, and espied near by an alligator, and as I looked at him he opened his mouth as though he was under the impression that I was good to eat; but picking up a large pebble, I luckily tossed it down his throat, which he evidently considered a sample of the hardness of my heart, and altered his mind, and made way for the Minde river, which was near at hand. * *

When that dark speck appeared away out where the horizon meets the sea, and grew more and more distinct, I wondered if it were possible that it would bear me home. And as I watched it still, I became convinced of what I could not realize, for it *was* the Ohio, riding proudly by to her moorings at Chagres. When once more, and for the last time, I looked back from the Gorgona upon Manzanilla and her beautiful harbor, I thought that I would love again, at some distant day, to view this scene and mark the change that time and enterprise will soon make there. That time is not far hence when the readers of this will view the scene I have attempted to describe, though I may not. When once more my footsteps were upon the deck of the good ship Ohio, I felt that familiar things were about me, and they reminded me more vividly of home—and my thoughts went homeward.

CHAPTER XXIV.

Jamaica—The Harbor at Kingston—Water Imps—Fruits—A Ride to Spanish Town—How we got a Dinner and paid for it—The Public Square—Desolation.

On the morning of the fourth day after leaving Chagres, we made the island of Jamaica, and as we sailed along the coast, the mountains seemed to rear their heads higher and higher, and to appear more and more barren, while, on the lowlands, the vegetation became more and more distinct and luxuriant in appearance, until we entered the harbor of Kingston. This harbor is one of Nature's very singular and beneficent provisions for the necessities of our race. Across the mouth of a shallow bay, a narrow breakwater extends from one point nearly to the other, a distance of about four miles, leaving barely room for the convenient passage of vessels in and out. Upon the end of this natural embankment is situated a fortification, having full command of the entrance. So low is this point, the surface being scarcely above the level of the sea, and few of the edifices more than one story, with the low ranges of batteries radiating in every direction seaward, that its appearance is altogether comical compared with the more formi-

dable works usually to be seen upon the entrance of the old Spanish ports; yet, with its white sand beach, skirted with cocoanut trees, it makes an exceedingly pleasant impression. On entering the harbor the sailing course is along parallel with the breakwater, about four miles, to Kingston, which lies on the main coast upon the left hand. The harbor, in its whole length, is about five miles, and, on an average, I should think two wide. Kingston is a fair sample of an old Spanish town going to decay, with here and there a prop from English enterprise, contrasting strongly with everything native. The population is said to be about 60,000 or 70,000, mostly creoles and negroes, with here and there an English face, that does not seem altogether at home.

Scarcely had our ship made fast before a swarm of little imps appeared in the sea about her, calling out to the passengers, "Massa, give me a dime?" While wondering how the request could be complied with, if so benevolently inclined, some one will teach the lesson by skipping one at as great a distance as possible from them, to see the sport of their struggle to obtain it, which they are sure to do, by turning in the water with the expertness of an eel, and following the course of the glittering coin, which is usually grasped before it reaches the bottom, and exhibited on rising to the surface, and then stowed away in the mouth. The pier was soon loaded with baskets of every conceivable size and shape, containing oranges, lemons, mangoes, and many other fruits and nuts, while bananas, pine apples, &c., were

piled about in rich profusion, with gorgeous "turk's heads," and other tropical plants and fruits, all of which our ship was soon made to bear in great quantities, giving its deck much the appearance of a floating garden. The delicious sweet *chirimoya*, or "sweet sop," as it is familiarly called, is to be found here in its greatest perfection, resembling very much a custard, but of a more delicate flavor. Mangoes are divided numerically into eleven qualities or kinds, the eleventh being the smallest and choicest fruit. On going ashore, we found the carriage pass closed by a heavy gate, and consequently were obliged to make our entree to the street, first, through a long shop, overflowing with all kinds of knick-knacks, and from thence through a drinking saloon, out a narrow door, between two sable sentinels, whose eyes glistened scarcely less than their polished arms.

Wandering about the town, we stumbled upon, or rather into, the railroad depot, and finding a train of cars would soon leave for Spanish Town, the seat of government, we took our seats in one for a ride, having first paid three shillings sterling, each, while the common people were privileged, in the car next to us, for one. The road runs near the coast most of the way, on low ground, and therefore not much cultivated; but along either side was a hedge of aloes, which, with their thick leaves armed with thorns sticking out in every direction, presented a very formidable obstacle to get over; indeed, we believe a locomotive was never known to run into them.

On arriving at Spanish Town, distant thirteen miles from Kingston, we took a vehicle and requested to be drove to the best hotel in the place, and accordingly were soon left upon the veranda of an old building that was evidently more worn out by time that use. At first we were in doubt whether or not the place was inhabited, but finally a boy appeared to whom we gave our order for a dinner for three. The idea seemed to astonish him at first, but he finally recovered his composure, and soon the preparations were seen in a state of progress. Our dinner was really a good one, for which a formidable bill of items was presented, amounting in all to 1*l.* 10*s.* 6*d.* sterling. Travellers may always be sure that if they order anything here, without stipulating a price, it will be "calculated" they are able to pay a large one.

On our way to the depot, we strolled through the public square, which occupies one block, and faced upon the four sides by the public buildings, which are as quaint and old as need be, yet erected with a good deal of pretence to elegance, originally. In front of one, which I took to be the Governor's palace, were two more of the sable race in regimentals —yet evidently for custom's sake, for they were the only individuals in sight, although we walked about the square, examining the flowers and plants (for it is a garden) nearly half an hour. We left the city, feeling that it had, indeed, been deserted.

APPENDIX No. 1.

Meteorological Journal kept at Manzanilla Island, New Granada, Lat. 9° 21″ north, Long. 79° 59″ west, from Greenwich, during the months of June, July, August and September, 1851,

By E. L. BERTHOUD, Civil Engineer.

METHOD OF OBSERVATION.—The force of the wind is estimated in numbers, 0 being a calm, 1 a very light breeze, 2 a gentle breeze, 3 a fresh breeze, 4 a strong wind, &c. The clearness of the sky will also be marked in numbers, 0 representing entire cloudiness, 1 a slight degree of clearness, and so on till 10 entire clearness. The force of the wind is put after the course—thus, for example, if the wind is from the S. W. strong, it will be set down S. W. 4.

1851.	Thermometer.					Clearness of the Sky.				Wind.				Rain.	
June.	Sun Rise.	9 A.M.	3 P.M.	9 P.M.	Daily Mean.	Sun Rise.	9 A.M.	3 P.M.	9 P.M.	Sunrise.	9 A.M.	3 P.M.	9 P.M.	Began.	Ended.
1	74	83	83	79	79.75	8	9	9	9	S. 1	S. 1	N.W. 2	N.W. 2	4 P. M.	5 P. M.
2	76	79	80	80	78.75	3	3	1	0	S.S.E. 2	N. 3	N. 3	N. 3	2 A. M.	9 A. M.
3	76	75	75	76	75.50	0	1	2	2	N. 3	N.E. 1	S.W. 1	N. 2	7 A. M.	½5 P. M.
4	74	75	82	80	77.75	0	3	3	1	S.E. 2	N.E. 2	N.W. 4	N.E. 3	7 A. M.	11 A. M.
5	76	79	85	78	79.50	1	1	1	3	N.E. 2	N.E. 2	N.W. 4	N.E. 1	3 P. M.	½3 P. M.
6	74	76	79	76	76.25	1	3	1	1	S.S.E. 2	N.W. 3	N.W. 3	N.W. 2	7 A. M.	½8 A. M.
7	72	76	77	77	75.50	0	0	0	1	N. 3	N.W. 2	S.W. 2	N.W. 2	1 P. M.	½2 P. M.
8	72	76	78	76	75.50	5	5	0	0	N. 2	N.W. 3	N.W. 2	N.W. 1	¾1 P. M.	½5 P. M.
9	73	74	83	78	77	0	2	7	7	S.W. 2	S.W. 3	N.W. 3	N.E. 4		
10	75	78	80	77	77.50	7	8	0	4	N. 1	S.W. 2	N.E. 2	N.E. 2	1 P. M.	4 P. M.
11	76	79	76	78	77.25	6	5	0	3	N.E.N. 2	N. 2	N. 2	N. 2	12 M.	½2 P. M.
12	73	78	81	79	77.75	4	3	4	2	S. 2	S.W. 2	N.E. 2	N. 3		
13	76	78	80	80	78.50	2	2	3	3	N. 3	N. 2	N.W. 3	N. 4	4 P. M.	8 P. M.
14	79	80	81	80	80	4	1	2	2	N.W. 2	S.W. 2	N.W. 4	N.W. 2		
15	76	77	79	79	77.75	1	1	0	0	N.W. 2	N.W. 2	N.W. 4	N.W. 4		
16	74	77	75	75	75.25	3	2	0	0	N.W. 2	S.W. 2	N. 3	S. 1	½1 P. M.	½5 P. M.
17	73	75	80	76	76	2	1	0	0	S. 2	S.E. 2	S. 2	N. 1	½2 P. M.	6 P. M.
18	74	77	78	74	75.75	2	2	0	0	S. 1	S. 2	S. 2	0	1 P. M.	½6 P. M.
19	72	78	83	79	78	1	2	6	0	S. 1	S. 2	S. 2	0	½2 P. M.	6 P. M.
20	74	78	81	79	78.75	5	6	8	5	S. 1	N. 2	N. 2	N. 3		
21	73	78	85	79	78.75	7	6	7	4	N.W. 2	N.W. 2	N.W. 2	N. 3	1 P. M.	2 P. M.
22	74	78	80	76	77	8	7	8	0	N.W. 2	N.W. 2	N.W. 3	S. 2		
23	76	75	78	77	76.50	0	2	2	9	E.N.E. 2	S. 2	S. 2	S.E. 2		
24	74	78	79	78	77.25	2	2	5	0	N.W. 3	N.W. 2	N.W. 4	S.E. 3		
25	74	76	79	76	76.25	0	0	0	0	N. 2	N. 2	N.W. 3	N.E. 3	1 A. M.	½7 A. M.
26	74	77	75	75	75.25	0	2	0	0	S. 2	S.W. 2	N.W. 3	S. 1	½12 P. M.	3 P. M.
27	72	75	81	76	76	5	5	2	2	N.W. 2	N.W. 3	N.W. 2	N.W. 4		
28	74	78	82	78	78	3	2	5	2	S. 4	S. 4	S. 4	S. 3		
29	74	75	79	74	76.25	3	7	3	5	S. 2	S. 3	N.W. 3	N.W. 2		
30	76	79	81	80	79	5	7	7	4	S. 1	S.	W. 3	N.W. 3		
31															

1851.	Thermometer,					Clearness of the Sky.				Wind.				Rain.	
July.	Sun-rise.	9 A.M.	3 P.M.	9 P.M.	Daily Mean.	Sun-rise.	9 A.M.	3 P.M.	9 P.M.	Sunrise.	9 A.M.	3 P.M.	9 P.M.	Began.	Ended.
1	76	80	82	76	78.50	6	6	4	0	N. 1	N. 1	N.W. 2	S. 3		
2	74	80	80	77	77 75	5	6	3	1	N.W. 1	N.W. 1	N.W. 1	N.W. 1		
3	74	76	81	76	77.75	0	0	8	7	S. 1	N.W. 1	N.W. 1	S. 1	3 P. M.	5 P. M.
4	74	77	80	78	77.25	7	3	2	0	N.W. 1	E. 2	N.W.N.3	S. 1	12 M.	1 P. M.
5	74	78	83	80	78.75	10	10	10	2	S.W.S. 1	N.W. 2	N.W. 3	N.W. 4	Showery.	
6	78	81	84	80	81	8	9	5	4	N.W. 1	N.W. 2	N. 4	N.E. 4		
7	78	80	82	77	79.25	4	5	0	0	N.E. 1	N.E. 2	N.E. 3	N.E. 4	4 P. M.	
8	78	76	77	77	76.25	0	0	0	0	N.E. 2	S.E. 2	N.W. 2	W. 3	7 A. M.	⅛ A. M.
9	72	77	81	78	77	3	4	3	0	N. 1	N. 1	N. 2	N. 2		
10	74	76	78	78	76.50	0	0	2	1	N. 1	N. 1	N.W. 3	W. 3	howery.	
11	75	79	80	78	78	2	2	3	0	N. 1	N.W. 1	N.W. 3	N. 2	2 P. M.	
12	80	75	77	76	77	0	0	0	0	N.E.N. 3	E. 2	N.W. 2	N.W. 1	6 A. M.	9 A. M.
13	74	76	80	78	77	0	0	0	0	N. 1	N.W. 1	N.W. 1	N.W. 1	5 P. M.	7 P. M.
14	74	76	81	78	77.25	0	0	1	0	N.W. 1	N.W. 1	W. 2	S. 1	5 A. M.	⅛ A. M.
15	77	74	76	76	75.75	0	0	0	0	N.W. 1	N.W. 2	N.W. 1	N.W. 1	⅛ A. M.	⅛ P. M.
16	72	78	81	81	78	5	7	8	0	N.W. 1	N.W. 1	N.W. 1	N. 1		
17	75	79	81	80	78.75	3	5	4	5	N.W.N.1	WNW 2	W. 2	N. 1		
18	76	81	81	79	79.25	4	3	8	0	N. 1	N. 1	N.W. 2	N.E. 3		
19	77	80	79	79	78.75	5	6	0	0	N.W. 2	N.E.N. 2	N.N.E. 2	N.W. 2	11 A. M.	5 P. M.
20	76	79	79	75	77.25	8	7	0	0	N.W. 1	N.W. 1	N.E. 2	S.W. 1	4 P. M.	⅛ P. M.
21	74	79	77	76	76.50	0	0	0	5	S. 2	S E. 2	N.W. 1	N. 1	10 A. M.	4 P. M.
22	73	76	84	78	77.75	0	5	9	9	S. 2	S.E. 1	E.N.E. 2	0		
23	76	79	83	80	79.50	9	9	9	9	N.W. 1	S. 1	N.W. 1	N. 1		
24	76	77	80	80	78.25	0	0	0	5	N. 1	N.W. 1	N.W. 2	N. 2		
25	77	82	84	75	79.25	4	8	8	5	N. 1	N. 1	N.W. 2	N. 4		
26	79	83	77	77	79	8	0	0	0	N. 2	N. 1	N.W. 3	N. 1	1 P. M.	⅛ P. M.
27	75	74	78	77	76	0	0	0	0	N. 2	N.E. 3	N. 3	N. 4	9 A. M.	⅛ A. M.
28	74	75	80	78	76.75	0	0	0	0	N. 2	N.W. 2	N. 2	N.W. 2	12 M.	⅛ A. M.
29	78	81	84	78	80.25	2	2	8	4	N. 2	N. 2	N.W. 3	S.W. 1	7 A. M.	8 A. M.
30	74	80	82	81	79.25	8	9	9	9	N. 1	N. 1	N. 2	N. 2		
31	79	79	84	81	80.25	8	8	9	8	N. 2	N. 2	N. 3	N.E. 2		

1851.	Thermometer.					Clearness of the Sky.				Wind.				Rain.	
Aug.	Sun-rise.	9 A.M.	3 P.M.	9 P.M.	Daily Mean.	Sun-rise.	9 A. M.	3 P. M.	9 P. M.	Sunrise.	9 A. M.	3 P. M.	9 P. M.	Began.	Ended.
1	79	80	82	78	79.75	0	0	8	9	N.W. 1	E. 2	N. 3	N.W. 2		
2	76	75	79	77	76.75	0	0	0	0	S.W. 1	S.W. 2	N.E. 2	N. 1	6 A. M.	½12 P. M.
3	74	77	85	78	78.50	8	7	8	0	N. 1	N. 1	N. 2	N. 2	6 P. M.	8 P. M.
4	76	81	77	76	77.50	0	0	0	0	N. 1	N.E. 1	N.W. 1	N. 1	8 A. M.	10 A. M.
5	76	78	77	78	77.25	0	0	0	0	N.E. 1	N. 2	N. 2	N. 3	11 A. M.	12 M.
6	77	80	80	79	79	0	0	0	0	N. 1	N.W. 2	N. 2	N. 2		
7	74	72	74	76	74	0	0	0	0	N.W. 4	N.W. 3	N. 2	N. 2	1 A. M.	3 P. M.
8	72	76	80	78	76.05	0	2	7	7	N.W. 2	N.W. 2	N. 2	N. 2	Showers.	
9	78	79	82	81	80	0	2	2	4	N. 2	N.W. 2	N. 2	N. 1	Showers.	
10	78	79	84	79	80	0	0	2	0	N. 1	N. 1	N. 1	N. 1	Showers.	
11	74	79	81	79	78.25	5	4	3	6	N. 1	S. 1	N.W. 3	N. 2		
12	76	79	80	76	78	0	0	3	0	S. 2	S. 2	W. 2	N. 1	7 P. M.	½7 P. M.
13	76	77	81	79	78.25	0	2	5	0	N. 3	N.W. 2	N.W.N.3	N.W. 1	6 A. M.	8 A. M.
14	76	79	81	80	79	0	3	0	0	N.E. 2	N. 1	N. 1	N. 1		
15	76	79	80	76	77.75	0	0	0	0	S. 1	S.W. 1	N. 2	S.W. 1	4 P. M.	½7 P. M.
16	74	80	80	74	77	0	2	0	0	S. 1	N.W. 1	S.W. 1	S.W. 1	Showers.	
17	73	78	81	77	77.25	3	4	2	8	N 1	S. 1	N. 2	N. 1		
18	73	81	85	80	79.75	2	1	0	9	N. 1	N. 1	N. 3	N. 4	3 P. M.	½3 P. M.
19	77	80	82	80	79.75	2	9	9	9	N. 1	N. 2	N. 2	N. 1		
20	78	80	80	78	79	0	0	0	2	S.E. 1	S.W. 1	N.W. 2	N. 2	11 A. M.	12 M.
21	76	79	80	77	78	0	0	0	9	N. 1	S.W. 1	S.W. 2	N. 2	3 P. M.	½5 P. M.
22	74	74	80	74	75.25	0	3	0	9	S. 1	S.E. 1	N.W. 2	S. 1	½10 A. M.	3 P. M.
23	72	77	78	77	76	0	3	0	0	N. 1	N. 1	N. 2	N. 1	½2 P. M.	3 P. M.
24	75	77	78	77	76.75	0	4	0	0	N. 1	N. 2	N.W. 3	N. 1	2 P. M.	¼4 P. M.
25	74	76	75	77	75.50	0	0	0	0	N. 2	N. 1	N. 2	N.E. 1	11 A. M.	3 P. M.
26	74	80	81	77	78	0	0	0	8	N. 1	N. 2	N. 1	N.S. 1	9 A. M.	11 A. M.
27	73	78	80	79	77.50	5	4	3	5	N.W. 2	N. 2	W. 2	N. 1	Showers.	
28	76	78	80	80	78.75	0	2	8	0	N. 1	S.W. 1	N.W. 3	N.E. 2	"	
29	76	76	83	78	78.25	0	0	0	8	N. 1	N.W. 1	N.W. 2	N. 1	"	
30	76	78	78	77	77.25	0	0	0	9	N. 2	S. 2	N.W. 2	N.E. 1	"	
31	73	80	80	79	78	0	4	0	0	N.E. 4	N. 3	N.E. 3	N.E. 3	12 M.	2 P. M.

1851.	Thermometer.					Clearness of the Sky.				Wind.				Rain.	
Sept.	Sun-rise.	9 A.M.	3 P.M.	9 P.M.	Daily Mean.	Sun-rise.	9 A.M.	3 P.M.	9 P.M.	Sunrise.	9 A. M.	3 P. M.	9 P. M.	Began.	Ended.
1	76	79	78	79	78	7	0	0	2	N. 1	S.W. 2	N.W. 1	N.W. 2	½10 A. M.	3 P. M.
2	79	81	81	79	80	3	5	0	0	N. 3	N. 3	N. 2	S. 2	½7 P. M.	½9 P. M.
3	73	78	78	76	76.25	0	0	0	7	N. 1	S. 1	N.W. 2	S. 1	6 A. M.	7 A. M.
4	74	74	80	79	76.75	5	7	0	3	N. 1	N. 1	N.W. 3	N. 1		Slight Showers.
5	76	76	80	70	78	0	0	0	0	N. 1	N. 1	N. 3	N. 2	6 A. M.	½7 P. M.
6	77	78	78	78	77.75	0	0	0	0	N.E. 1	N. 2	N.W. 2	N.E. 2	½10 A. M.	2 P. M.
7	78	84	84	77	80.75	0	3	0	0	N.W. 2	N.W. 2	N.W. 2	N.W. 2	Showers.	
8	73	78	83	75	82.25	0	2	0	8	S. 1	N.W. 3	N.W. 2	S. 1		
9	73	79	84	76	78	8	8	8	6	N. 1	N.W. 2	N.W. 2	S. 1	½2 P. M.	5 P. M.
10	72	78	80	74	76	7	3	0	0	S. 1	N.W. 1	S. 2	S. 1	2 P. M.	½5 P. M.
11	72	78	83	79	78	3	5	2	8	S. 1	S. 2	N.W. 1	N. 1	Showers.	
12	74	81	81	79	78.75	8	8	0	0	N.W. 2	N.W. 1	N.W. 2	N. 1	2 P. M.	½3 P. M.
13	76	78	81	77	77.75	3	4	0	0	N. 1	N.E. 1	N.W. 2	S. 2		
14	76	80	81	75	78	2	4	0	0	N. 1	N.W. 2	N. 3	S. 2		
15	74	79	77	78	77	3	4	0	0	N.E. 1	S. 2	S. 2	S. 2	10 A. M.	11 A. M.
16	74	80	85	80	79 75	2	3	3	8	S. 2	S. 1	S. 2	S. 1	Showers.	
17	75	78	84	79	79	3	2	2	4	N. 1	S. 2	N. 2	S. 1	"	
18	76	79	82	76	78.25	3	2	4	0	S. 1	S.	N.W. 2	S. 1	½6 P. M.	9 P. M.
19	74	80	78	75	76.75	2	4	0	0	N. 1	N.W. 2	N.W. 2	S. 2	½11 A. M.	3 P. M.
20	76	79	82	76	78.25	3	2	0	0	S. 2	N.W. 2	N.W. 2	S. 1	5 P. M.	6 P. M.
21	74	76	79	75	76	0	4	0	0	S. 1	S. 2	S. 2	S. 2	½12 P. M.	1 P. M.
22	74	82	79	77	78	2	0	0	0	S. 1	S. 2	N. 1	N. 1	11 A. M.	4 P. M.
23	74	76	80	80	77.75	5	5	0	0	S. 1	S. 2	N.E. 1	S. 2	3 P. M.	4 P. M.
24	76	79	78	74	76.75	5	2	0	0	N.W. 2	S. 2	S. 2	S. 1	1 P. M.	¼4 P. M.
25	72	78	78	76	76	0	0	0	0	S. 2	S. 2	S. 2	S. 2	Slight	Showers.
26	77	78	84	78	79.25	5	4	7	0	S. 1	S. 2	S.W. 2	S. 1	"	"
27	76	79	82	79	79	5	3	0	8	S. 1	S.W. 1	N.W. 2	S. 1	"	"
28	78	78	82	79	79.25	0	0	0	0	N.W. 2	N.W. 4	W. 2,	S. 2	3 A. M.	5 A. M.
29	78	76	76	75	76.25	0	0	0	0	S. 2	N.W. 3	N.W. 2	S. 1	Showers.	Showers.
30	71	80	79	77	76.25	5	5	0	0	S. 2	S. 2	S. 2	S. 1	"	"
31															

APPENDIX No. 2.

For the interest of those who intend crossing the Isthmus of Panama, I have inquired at the office of the Panama Railroad Co., in this city, to ascertain the present stage in the progress of that work, and how far it is made to serve the interest of the travelling public.

The track has been mostly laid for some time from Navy Bay to Bujio Soldado, a distance of about twenty miles by the Railroad, and thirty-five miles up the river, from Chagres. The only point incomplete is that between Gatun and Ahorca Lagata, where the work was delayed in a measure by the rainy season.

Probably before the first day of January, 1852, the cars will be running from Navy Bay to Ahorca Lagata, or Bujio Soldado and from thence passengers will be obliged to employ small boats for the remaining distance to Gorgona. During the dry season which embraces the months of December, January February, March and April, the road between Gorgona and Panama, a distance of about twenty miles, is a good one for transit by mules, which is the only land conveyance in this country.

With the commencement of the present dry season, the Panama Railroad Co. put on the road an increased number of men, and the work is now being pushed forward with the utmost energy, and it without doubt will be completed to the river crossing at Gorgona, by the first of May next, if not before that time.

Whatever may be the inconveniences and difficulties encountered in crossing the Isthmus of Panama at present, the public

may be assured that it is by far the shortest, cheapest, and every way best route to the Pacific, and especially for those who go to California, and must carry a considerable amount of luggage.

The necessary expense in crossing the Isthmus varies from $25 to $35, according to circumstances, and the amount of luggage for such individual.

NEW YORK, Dec. 16th, 1851.